

Improving Schools in Scotland: An OECD Perspective



Improving Schools in Scotland: An OECD Perspective



This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Cover photo credits: Education Scotland

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of the source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.

Foreword

This policy review was commissioned by the Scottish Government. The agreed purpose was to inform the ongoing development of education policy, practice and leadership in Scotland, by providing an independent review of the direction of the *Curriculum for Excellence* (CfE) and emerging impacts seen in quality and equity in Scottish schooling. It focuses especially on the cycles corresponding to Broad General Education (BGE, i.e. up to student age 15) with the brief being to:

- Highlight key impacts of the approach taken to developing the curriculum to date.
- Analyse key aspects of education policy and practice in Scotland, and integrate insights from PISA and other evidence from different countries/regions.
- Highlight areas where further change or development could add value to an ongoing programme of educational improvement.

OECD Education Policy Reviews are tailored to the needs of the country and cover a wide range of topics and sub-sectors focused on education improvement. The reviews are based on in-depth analysis to arrive at recommendations, using diverse available sources of data such as policy documents and evaluations in the country in question, PISA and other internationally comparable statistics, and research findings. They draw on expert analysis of the key aspects of education policy and practice examined, incorporating policy insights from other countries. At the core of the process is a review visit by an OECD team of experts with specific expertise in the topics covered.

This review is part of OECD's efforts to strengthen the capacity for education reform across OECD member countries, partner countries, and selected non-member countries and economies. An OECD policy review provides an invaluable occasion to take a detached viewpoint on developments in a particular system, combining soundings of key stakeholders and analytical material about the system and drawing on international comparisons, examples and trends. The review is informed by patterns and practices in some of the most interesting comparable education systems.

We are grateful to the Scottish Government for having commissioned this review. They provided invaluable materials, hospitable welcomes at all meetings, and open and generous support throughout. We are grateful to the senior team who made the review possible and for their welcome and advice, especially Fiona Robertson and Alan Johnson of Learning Directorate at the Scottish Government, and Bill Maxwell and Graeme Logan of Education Scotland. We are particularly grateful to Lorraine Sanda, Learning Directorate, Scottish Government for the way she organised and co-ordinated the whole process; Jonathan Wright, James Niven and Mary Hoey for leading preparation of the background material and for providing extensive information subsequently; and to Jane Gallacher for her contribution to organisation. Those thanks extend to the many in the staffs and teams behind them who contributed in diverse ways.

We are grateful to all those we met during the review visit in June 2015, whose organisations and affiliations are listed in Annex 2 of this report. We are equally grateful to those who met the OECD staff in February 2015 in what is termed the "pre-visit". We

also wish to acknowledge Bruce Robertson for his role in accompanying the pre-visit. We are especially grateful to the schools and their leadership teams, staff, students, parents and other community members who met with us on both occasions.

We acknowledge the external experts who made up the review team (see Annex 1) for their intensive work during the visit and in subsequent drafting. Andy Hargreaves was especially responsible for Chapter 4 on schooling, teachers and leadership. Helen Timperley was especially responsible for Chapter 5 on evaluation and assessment. They also provided expert input and advice on the rest of the text.

Of the OECD experts on the review team, Maria Huerta was especially responsible for Chapter 2 on equity and quality and for the data analysis that underpinned it. David Istance led the review, and took responsibility for drafting all other chapters and sections, and for editing the overall text.

Within the OECD, we are particularly grateful to Diana Toledo, who organised the review process up to and including the pre-visit, and to Marie-Amélie Dorrington-Serre for her invaluable research assistance and data analysis. We received valuable advice on content and process from Francesca Borgonovi, Tracey Burns, Vanessa Denis, Marco Kools, Anna Pons, Andreas Schleicher, Richard Yelland and Juliana Zapata. Rachel Linden was responsible for the logistics and for the formatting, Louise Binns and Jennifer Cannon for the finalisation of the publication, and *Jouve* designed the graphics layout.

Table of contents

Executive summary.....	9
Quality and equity in Scottish schooling	9
Implementation of CfE in a new phase.....	10
Schools, teachers and leadership	10
Assessment and evaluation	11
Clarifying definitions.....	11
Our recommendations.....	11
Overview	13
Curriculum for Excellence – an important Scottish reform	13
Quality and equity in Scottish schooling.....	14
CfE at “a watershed” moment	16
Consensus and management of CfE.....	16
Schools, teachers and leadership	16
Assessment and evaluation.....	17
Our recommendations	19
Chapter One Scotland’s “Curriculum for Excellence”: Context and structure	25
The OECD review process.....	26
Scotland’s population, demographics and languages.....	27
The economic and social context – opportunities and challenges	28
Scotland’s own political and education system.....	32
The Curriculum for Excellence (CfE)	37
Key summary points.....	45
References	47
Chapter Two Quality and equity in Scottish schools.....	49
Quality and equity in Scotland - international evidence	50
Quality and equity – the Scottish evidence	62
Closing the gap?	72
Summary of the data analysis of quality and equity.....	78
Recommendations	82
Annex 2.A1 Scottish equity initiatives	85
References	88
Chapter Three Decision-making and governance for the “Curriculum for Excellence”	91
Implementation and governance of the <i>Curriculum for Excellence</i>	92
Insights from OECD work on governance and related international examples	96
Priorities for CfE governance and decision-making	99
Summary of key points	110
Recommendations	110
References	113

Chapter Four Schooling, teachers and leadership.....	115
The dimensions of reform	116
Teaching and learning	118
Teachers and professional capital.....	125
Leaders and leadership	133
Summary of key points	138
Recommendations	139
References	141
Chapter Five Assessment, evaluation and the “curriculum for excellence”	145
Main assessment and evaluation arrangements in Scotland.....	146
International trends in assessment and evaluation.....	151
Considerations for the Scottish education system.....	154
Summary of key points	164
Conclusions and recommendations.....	166
References	168
Annex A The review team.....	173
Annex B Review visit programme	175

Tables

Table 1.1 Well-being Indicators: Scotland, OECD and selected countries	33
Table 1.2 The levels and stages as the framework for the CfE “Experiences and Outcomes”	41
Table 1.3 Es and Os in a “component” (sub-area) of a CfE curriculum area	43

Figures

Figure 1.1 Population density in Scotland by Council Area: 2014.....	29
Figure 1.2 The distribution of Scotland and the OECD population by urban and rural locations.....	30
Figure 1.3 Youth unemployment rates in OECD Countries: 2013	30
Figure 1.4 Overview of the Scottish education system.....	35
Figure 1.5. Phases and stages in the Scottish school system	38
Figure 1.6 The “attributes” and “capabilities” of the four main CfE capacities.....	40
Figure 2.1 Achievement in mathematics, reading and science in OECD countries, PISA 2012.....	52
Figure 2.2 Trends in Scotland’s achievements in PISA by subject area since 2003	53
Figure 2.3 Sense of belonging of Scottish students on diverse measures: 2003 and 2012	56
Figure 2.4 Attitudes towards school among Scottish teenagers: 2003 and 2012.....	57
Figure 2.5 Motivation and anxiety towards mathematics: 2003 and 2012	58
Figure 2.6 Share of “resilient” students in the total school cohort, 2003 and 2012.....	59
Figure 2.7 Mathematics performance by immigrant status in PISA 2012.....	61
Figure 2.8 Levels of student performance in numeracy in the SSLN, 2011 and 2013	63
Figure 2.9 Levels of student performance in reading in the SSLN, 2012 and 2014.....	64
Figure 2.10 Percentage of school leavers by highest SCQF level and number of awards achieved, 2011/12 to 2013/14	65
Figure 2.11 Staying-on rates in publicly-funded secondary schools in Scotland, 2000/01 to 2014/15	66
Figure 2.12 Proportion of pupils performing well or very well by deprivation category and stage.....	69
Figure 2.13 Performance of pupils in S2 performing well or very well by deprivation category, 2011/12 – 2013/14	70

Figure 2.14 Percentage of school leavers in a positive follow-up destination by local authority, 2011/12 and 2013/14.....	72
Figure 2.15 Approaches to promote equity in schools in Scotland	73
Figure 4.1: The axes of school reforms	117
Figure 5.1 Main features of the overall evaluation and assessment framework	153

Boxes

Box 1.1. The OECD education policy review process	26
Box 1.2. Main bodies in the Scottish system	39
Box 3.1. Development of Curriculum for Excellence: 2002-2016	93
Box 3.2. Insights from OECD work on <i>Governing Complex Education Systems</i>	97
Box 3.3 “Leading for All”, Ontario, Canada	102
Box 3.4. Western Metropolitan Region (WMR) Reform, Victoria (Australia).....	103
Box 4.1 The Netherlands: Teachers Agenda 2013-2020	127
Box 4.2 The Alberta Initiative for School Improvement (AISI)	129
Box 4.3 The Ontario Teacher Leadership and Learning Programme	130
Box 4.4. The Greater Manchester Challenge.....	135
Box 5.1 Australian states sign up to assessment agreement	156
Box 5.2 New Zealand assessment tools for teaching and learning: e-asTTle.....	158
Box 5.3 Assessment of “broader” student learning outcomes in Singapore.....	162
Box 5.4 Research infrastructure to support policy and practice in the Netherlands	163
Box 5.5 Independent system monitoring: International examples.....	164

Executive summary

The *Curriculum for Excellence* (CfE) is an important reform to put in place a coherent 3-18 curriculum. It privileges learning and a holistic understanding of what it means to be a young Scot growing up in today's world. At its heart are the four fundamental capacities: i) Successful Learners, ii) Confident Individuals, iii) Responsible Citizens, and, iv) Effective Contributors. Up to around age 15, the aim is to lay the foundations for lifetimes of learning through Broad General Education (BGE), incorporating primary and the first stages of secondary schooling but also early learning from age 3 onwards. BGE is the main object of this OECD review.

There is a great deal to be positive about in such a review: learners are enthusiastic and motivated, teachers are engaged and professional, and system leaders are highly committed. There has been intensive activity to create suites of support materials and a drive to address excessive bureaucracy. There have been extensive professional learning events organised throughout Scotland. CfE has been anchored in consensus and a wider set of parallel reforms. These include teacher education, extensive work on qualifications and vocational educational and training, and the establishment of a National Parents Forum and a new Leadership College.

Quality and equity in Scottish schooling

We examined international and national evidence on quality and equity in Scottish education to give essential context to the review conclusions. This summary is not an evaluation of CfE, however, and indeed the evidence is not available for such an evaluation.

Positive developments

Levels of academic achievement are above international averages in science and reading as measured by PISA, while similar to the average in mathematics.

Achievement levels are spread relatively equally. Since 2003, Scotland has been among the OECD countries with the most equal scores of mathematics achievements among 15-year-olds.

Scottish students are “resilient” (those from the bottom SES quarter who perform in the top quarter of international achievement). Around 8% of Scottish students, higher than the international average, were identified as “resilient” in 2012.

Scottish schools are inclusive. Scottish schools do very well on measures of social inclusion and mix, along with Finland, Norway and Sweden. Scottish immigrant students achieve at higher levels than their non-immigrant peers, and Scotland enjoys one of the smallest proportions of low performers among its immigrant students.

There are clear upward trends in attainments and positive destinations. Over 9 in 10 of school leavers entered a positive follow-up destination in 2014, and nearly two-thirds

of school leavers continue on in education. There has been a continuous *upward* trend in recent years.

There are positive attitudes and connections. The large majority of Scottish students feel connected to their school environment and hold positive attitudes towards school. At least three in four Scottish students say that they get along with their teachers, teachers take students seriously, and teachers are a source of support.

Risk behaviour is improving. There have been noticeable drops in school-age teenage smoking and alcohol consumption. Over two-thirds of Scottish teenagers positively assess the support they get on this from their school. Disruptive behaviour is considered by teachers to be in decline.

Problems and challenges

Education Scotland inspection reports show a minority of schools and a small share of early learning centres remain just at or below “satisfactory”. In addition:

There have been declining relative and absolute achievement levels in mathematics on international data. On the most recent 2102 PISA surveys, Scotland was similar to the international average after having been one of the leading countries in maths achievement a decade before.

Declines are also observed using Scottish data. There were smaller relative numbers of top reading performers among primary and secondary students comparing 2012 and 2104. In primary schools, there were fewer scoring at the top in 2103 in numeracy compared with 2011, and larger numbers of low performers in secondary schools.

There are particular challenges confronting secondary schools. Liking school drops sharply among secondary students and reported belonging in school among Scottish teenagers has dropped since 2003. National surveys show a higher incidence of low achievement against expected level among secondary pupils than previously.

Implementation of CfE in a new phase

CfE is at a “watershed” moment. There has been a decade of patient work to put in place the full curriculum programme. That programme implementation process is nearing completion and this represents a prime opportunity boldly to enter a new phase.

The curriculum in Scotland has traditionally been implemented through consensus. The CfE Management Board, comprising a wide range of representative stakeholders in Scottish education, occupies a central position. *Education Scotland* has been a linchpin in providing the guidance resources and quality assurance. There has been coordination with other organisations to build system alignment and coherence, fitted to implementing CfE as a Scotland-wide curriculum programme. There is need now for a bold approach that moves beyond system management in a new dynamic nearer to teaching and learning.

Schools, teachers and leadership

Scotland has an historic high regard for education, and the trust towards teachers’ professional judgment is very welcome. There is widespread engagement with CfE and acceptance of its principles by teachers. Yet implementation is proceeding at varying speeds. The review calls for a strengthened “middle” operating through networks and collaboratives among schools, and in and across local authorities. As the local authorities

are integral to such a development, there needs to be complementary action to address the gaps between the high- and low-performing authorities.

Assessment and evaluation

Trust towards teachers and the formative emphasis, with diverse methods to collect information, are very positive aspects of the system. Even in CfE's own terms, however, problems are apparent. School inspection reports express concern that insufficient use is made of assessment information to support children's learning progress and curriculum development. Too many teachers are unclear what should be assessed in relation to the Experiences and Outcomes, which blurs the connection between assessment and improvement. Beyond existing terms, current assessment arrangements do not provide sufficiently robust information, whether for system-level policy-making, or for local authorities, or for individual schools or across CfE domains for learners and their teachers. The proposed National Improvement Framework has the potential to provide such a robust evidence base.

It will be essential to maintain the dual focus - on the formative function while improving evidence on learner outcomes and progression.

Research and evaluation

There is extensive professional knowledge but this is not balanced by large-scale research or evaluation projects on CfE by either the universities or independent agencies. There is a clear need to know how CfE is actually being implemented in schools and communities across Scotland. The research community could make an invaluable contribution, including on helping to design schooling so as to engage those most at risk of disengagement.

Clarifying definitions

CfE's scope still needs clarification: sometimes it is understood as a wide-ranging set of reforms whereas it would be better if it were interpreted more strictly as curriculum and related assessment and pedagogy. There needs clarification of how the four capacities relate to the extensive Experiences and Outcomes. Clarification would help to build forward momentum and a clear narrative. This is an opportune time to reconsider names, for example, "Curriculum for Excellence and Equity" or, for the broader strategies to which CfE contributes, "Raising Achievement and Attainment for All".

Our recommendations

The report contains a limited number of recommendations that we believe can help move the *Curriculum for Excellence* and the Scottish system to be among those leading the world. It needs an ambitious theory of change and a more robust evidence base, especially about learning outcomes and progress. CfE needs to be less managed from the centre and become more a dynamic, highly equitable curriculum being built constantly in schools, networks and communities with a strengthened "middle" in a vision of collective responsibility and multi-layer governance.

- **Be rigorous about the gaps to be closed and pursue relentlessly "closing the gap" and "raising the bar" simultaneously.**

- **Ensure a consolidated and evidence-informed strategic approach to equity policies.**
- **Develop metrics that do justice to the full range of CfE capacities informing a bold understanding of quality and equity.**
- **Create a new narrative for the *Curriculum for Excellence*.**
- **Strengthen the professional leadership of CfE and the “middle”.**
- **Simplify and clarify core guidance, including in the definitions of what constitutes the *Curriculum for Excellence*.**
- **Focus on the quality of implementation of CfE in schools and communities, and make this an evaluation priority.**
- **Develop targeted, networked, evaluated innovation in secondary school learning environments to enhance engagement.**
- **Develop a coherent strategy for building teacher and leadership social capital.**
- **Develop an integrating framework for assessment and evaluation that encompasses all system levels.**
- **Strike a more even balance between the formative focus of assessment and developing a robust evidence base on learning outcomes and progression.**
- **Strengthen evaluation and research, including independent knowledge creation.**

Overview

Curriculum for Excellence – an important Scottish reform

The *Curriculum for Excellence* (CfE) is an important reform putting in place a coherent 3-18 curriculum around capacities and learning. There is a holistic understanding of what it means to be a young Scot growing up in today's world promoted by the curriculum. At its heart are the four capacities regarded as fundamental to being a citizen and educated person in Scotland: i) Successful learners, ii) Confident individuals, iii) Responsible citizens, and iv) Effective contributors. CfE privileges learning - what young people learn and what they learn how to do – rather than the negotiation by students through particular programmes and subjects. It rests on a very contemporary view of knowledge and skills and on widely-accepted tenets of what makes for powerful learning.

There is a foundation laid for what should be lifetimes of learning through “Broad General Education” up to around age 15, incorporating not just primary and the first stages of secondary schooling but early learning from age 3 years; it is this which has been the main object of our review. This is combined with a flexible senior phase when various academic and vocational qualifications can be achieved.

The CfE framework is set nationally, as is the provision of key guidance materials and resources. Decisions about how the CfE is implemented rest with Local Authorities, their schools and teachers. Head teachers are responsible for the day-to-day implementation and management of the curriculum, which they do with their management teams, staff and local communities. There is a wide range of professional networks, working groups, conversations and conferences, which support practitioners and their partners and stakeholders. These function within and between schools and establishments, at Local Authority and inter-Authority levels as well as nationally facilitated by *Education Scotland*, Scottish Qualifications Authority (SQA) and professional organisations.

The picture of positive attitudes, engagement and motivation, partnerships outside the school, supportive ethos and teamwork that we acquired during our visit is supported by the evidence of school inspections. Learners are enthusiastic and motivated, teachers are engaged and professional, and system leaders are highly committed. As many as 9 in 10 inspections report improvement in confidence, engagement, staying on in school and national qualifications over the recent past, broadly coincident with the implementation of CfE in schools. There has been intensive activity to create suites of support materials and a prominent drive to address excessive bureaucracy linked to the curricular and assessment demands of CfE. There have been on-going and extensive related professional learning events organised throughout Scotland. And there has been intensive work undertaken within the management bodies closest to CfE.

Moreover, the *Curriculum for Excellence* has been anchored in a wider set of parallel reforms which are seen to be closely aligned with its successful implementation. Teacher education was subject to wide-ranging review resulting in the publication in 2011 of “Teaching Scotland’s Future” whose recommendations have been widely adopted. There has been extensive work on qualifications and vocational education and training. A National Parents Forum was established in 2011, made up of local authority representatives from Parents Councils across Scotland (and which is part of the CfE Management Board). A new Leadership College has been established in 2014. There are continued high-profile strategies such as the Scottish Attainment Challenge to address the stubborn issues of deprivation and education’s social gaps.

This overview chapter offers our summary assessment of evidence relating to quality and equity in Scottish schools, followed by a brief presentation of key contents from the different chapters. The recommendations that conclude each chapter (except for the first chapter that sets the context for which there are no recommendations) are presented in full.

Quality and equity in Scottish schooling

We examined international and national evidence on quality and equity as a key part of this review (Chapter 2). There are many positive features and developments to report and also those that are less positive and should inform future policy priorities. We emphasise that this summary is not an evaluation of CfE itself, and indeed the evidence is not available for such an evaluation (on which more below). Our review of quality and equity data as much describes the context and challenges for CfE as it serves as a reflection on it. We regard this evidential summary on quality and equity as an essential aspect of our review insofar as these trends and developments should inform current policy and practice.

Positive developments

Levels of academic achievement are above international averages in science and reading as measured by PISA, while similar to the average in mathematics. For reading, the large majority of children in both primary and secondary schools perform at high standards with the lowest performers representing a very small proportion. Achievement levels are spread relatively equally. Since 2003, Scotland has been among the OECD countries with the most equal scores of mathematics achievements among 15-year-olds and the spread by socio-economic background in Scotland is narrower than across the OECD as a whole. A third of disadvantaged students were identified as “resilient” in 2012, meaning those from the bottom quarter in status terms who perform in the top quarter of international performance. This is higher than the OECD average of 25%. Girls do better than boys in reading and boys do better than girls in mathematics and science but the size of the gender gaps in reading, especially among the low-performing students, is well down on the OECD average.

Scottish schools are inclusive. On international comparisons showing how far students of different socio-economic backgrounds attend the same school, Scottish schools are highly inclusive. Scotland belongs to a small group of inclusive countries with Finland, Norway and Sweden. Scottish immigrant students achieve at higher levels than their non-immigrant peers, and Scotland enjoys one of the smallest proportions of low performers among its immigrant students.

There are clear upward trends in attainments and positive destinations. Over 9 in 10 of school leavers found a positive follow-up destination in 2014, and nearly two-thirds of school leavers continue on in education. There has been a continuous upward trend in positive destination levels in recent years. Rural students have higher relative attainments and positive destinations but the gaps with towns and cities have narrowed.

There are positive attitudes and connections. The large majority of Scottish students feel connected to their school environment and they hold relatively positive attitudes towards school. At least three in four Scottish students say that they get along with their teachers, teachers take students seriously, and teachers are a source of support. More held positive perceptions of teacher-student relationships in 2012 than they did in 2003.

Risk behaviour is improving. There have been noticeable drops in school-age teenage smoking and, especially, alcohol consumption. Over two-thirds of Scottish teenagers positively assess advice and support they get on this from their school. Low-level and serious disruptive behaviour are both considered in staff surveys to be in decline, though unauthorised absenteeism is above the OECD average.

Problems and challenges

Education Scotland inspection reports show a sizeable minority of schools just at or below “satisfactory”. As many as one in five schools receive only a “satisfactory” evaluation in inspections, across five quality indicators, and a smaller but non-trivial share (6% of early learning centres and 10% of schools) are judged to be offering only weak or unsatisfactory provision.

There are declining relative and absolute achievement levels on international data. On the most recent PISA surveys from 2012, Scotland was similar to the international average in mathematics after having been one of the leading countries in maths achievement a decade before. Trends since 2003 in Scotland show a growing proportion of low achievers in maths and a shrinking proportion of high achievers. Scotland’s performance in reading dropped sharply between 2003 and 2006, and has remained statistically unchanged over succeeding PISA cycles.

...And declines using Scottish data. Reading showed a decline between 2012 and 2014 using The Scottish Survey of Literacy and Numeracy (SSLN) data, with smaller relative numbers of top performers among primary and secondary students. SSLN shows that performance in numeracy declined between 2011 and 2013. In primary schools, there were fewer scoring at the top, but there were larger numbers of low performers in secondary schools. The achievement gap between the least and most deprived also increased in the SSLN for both numeracy and literacy.

There are particular challenges confronting secondary schools. Scottish adolescents are less likely to report liking school than students in many countries, and liking drops sharply in secondary school. The reported sense of belonging among teenagers in Scotland has dropped since 2003. Using SSLN, over two-thirds of primary school pupils perform well or very well in numeracy when assessed against the expected level but the same can be said of only around 40% of students in S2. Less than 3% of the primary pupils were at the lowest performance level but this rises to nearly a third in S2. These gaps widen between areas of high and low deprivation in both numeracy and literacy, but especially numeracy.

CfE at “a watershed” moment

“CfE is at a watershed”. This judgement was expressed to us on a number of occasions during our meetings and it makes our review the more timely. This judgement is in part a statement of fact: there has been a decade of intense work to put the main pieces of the curriculum programme in place, itself a tribute to the patience of the Scottish policy process to see a major reform drive right through, including putting the necessary assessments, qualifications, and support structures in place. That programme implementation process is nearing completion and so a phase is ending. This reality represents a prime opportunity boldly to enter a new phase, building on the achievement to date.

With the different foundations put down, with complementary building blocks especially around teacher education, vocational qualifications and leadership now in place, one attitude could be simply to wait for the fruits to come by themselves. We counsel against that view. Our recommendations sum up important shifts that we think should occur so that the “watershed” becomes a genuine launch point.

A major challenge is how to stay bold and to build on what has already been accomplished in a way that is as persuasive to the public as it is to the profession, and that can achieve greater equity for all pupils sooner than later. It will need to increase the value assigned to data and research evidence alongside professional judgment, on the one hand, while maintaining the consensus that comes through collaboration and partnership, on the other. It means going to the full conclusion of a curriculum that is to be built by teachers, schools and communities, alongside a strengthened “middle” and clear system leadership.

Consensus and management of CfE

The curriculum in Scotland has traditionally been implemented through a consensual approach rather than through legislation. Building consensus, as well as designing and creating extensive frameworks, reference materials, and professional engagement, are in the system’s DNA and have been nurtured through deliberate policy. There have been very substantial investments in professional development. We see this as a very positive feature of Scottish education, especially in the degree to which it is about displaying and nurturing trust.

The CfE Management Board, comprising a wide range of representative stakeholders in Scottish education, occupies a central position in directing the *Curriculum for Excellence*. *Education Scotland* has been a linchpin in providing the guidance resources and quality assurance. It needed coordination with a variety of other organisations and programmes to achieve system alignment and coherence. This arrangement has been well fitted to the task of implementing CfE as a Scotland-wide curriculum programme. That task required consensus and managing processes so that implementation, including of assessment and qualifications, would happen as smoothly as possible. In our view, there is need now for a bold approach that moves beyond system management in recognition of a new dynamic and energy to be generated nearer to teaching and learning.

Schools, teachers and leadership

We saw examples and referred to evidence of widespread engagement of young Scots in their learning. For a curriculum that puts learning at the centre, this is fundamental.

There is widespread engagement with CfE and acceptance of its principles by teachers. A range of new practices is being embraced by them, enhanced by the collaborative and collegial working which is a necessary feature of a 21st century school system. Yet implementation is proceeding at various speeds and with varying degrees of adroitness – ultimately, it is the quality of the implementation of the curriculum that matters.

Scotland has an historic high regard for learning, education and teachers, and the trust it invests in teachers' professional judgment is admirable. The importance assigned to teachers' professional judgment in the implementation of CfE is grounded in the influential 2011 report, *Teaching Scotland's Future*, whose call for a stronger teaching profession has been heeded in the extent of implementing its recommendations. There is an inspiring set of professional standards defined by the General Teaching Council of Scotland. A major strategy for developing greater coherence in educational leadership has been the creation of the Scottish College for Educational Leadership (SCEL).

We call for a strengthened “middle” operating through networks and collaboratives among schools, and in and across local authorities. We see leadership best operating not only *in the middle* but *from the middle* and indeed see an extended middle as essential to allow CfE to reach its full potential. Yet, so far as the local authorities are integral to such a development, there needs to be complementary action to address and overcome the gaps between the high- and low-performing authorities. This is another important element of “closing the gap”.

There needs to be clarity about the kinds of collaboration that work best to bring about the innovations and improvements to enhance student learning, and to create coherent and cohesive cultures of system-wide collaboration. This is not an argument for mandated collaboration or contrived collegiality to implement centrally-defined strategies. But it is to argue for greater consistency in collaborative professionalism and of moving towards the higher quality collaborative practices that have the most positive effects on student learning.

Assessment and evaluation

With the introduction of CfE, assessment became a part of the curriculum – assessment as essentially part of, and not separate from, learning and teaching. This more holistic approach stands in sharp contrast to the previous system of national assessments throughout primary and lower secondary schooling. The formative assessment emphasis, with its range of methods to collect information, was designed to support learning. The developmental emphasis of teacher appraisal and school self-evaluation came together into a coherent whole. Light sampling of learners in literacy and numeracy for national monitoring purposes kept the focus on assessing progress for improvement purposes rather than for strong accountability. The support for learning and trust towards teachers are very positive aspects of the current system.

Over time, however, certain issues and shortcomings have become apparent. Partly, this has been about how well the system has functioned in its own terms – its clarity, efficiency and implementation. A common concern in school inspection reports is the effective use of assessment information to support children's progress in their learning, and development of the curriculum. Our interviews during the school visits suggested a wide range of assessment practices, with some schools and teachers having difficulty in prioritising assessment tasks. The lack of clarity about what should be assessed in relation to the Experiences and Outcomes contributes to this problem, despite *Education*

Scotland's attempts to identify significant areas of learning and how to assess them. Some of those interviewed, particularly in secondary schools, expressed the view that this lack of clarity has created the risk that CfE “comes down to the examinations”.

This in turn too often leads to excessive paperwork, a tick-box approach, and the blurring of the close connection between assessment and improvement. This has been acknowledged in the “Tackling Bureaucracy” drive. The drive has been on-going throughout most of the period that CfE has been implemented and recent research commissioned by the government suggests that it has been far from resolved. One of our recommendations is devoted to it. A key problem is thus lack of a clear view and practice surrounding the role of assessment within the CfE framework.

The issue is not simply one of implementation within existing terms. Current national assessment arrangements in Scotland do not provide sufficiently robust information, whether for system-level policy-making, or for local authorities or an individual school or across important domains of CfE for learners and their teachers. This affects both the quality of educational practice and policy, and the confidence of stakeholders in the achievements in CfE. Very recently, the Scottish Government has outlined a National Improvement Framework, which was still at proposal stage at the time of this review. This Framework has the potential to provide a robust evidence base in ways that enhance rather than detract from the breadth and depth of the CfE. Given Scotland's previous bold moves in constructing its assessment frameworks on the best available research evidence at the time, it now has the opportunity to lead the world in developing an integrated assessment and evaluation framework.

We believe that it will be fundamental to maintain the dual focus - both the strong emphasis on the formative function while improving evidence on learner outcomes and progression.

Research and evaluation

There is no shortage of documentation emerging from the system, including (but not only) from *Education Scotland*. There is extensive knowledge about the system, and the clear intention is to make that knowledge accessible to practitioners. A great deal of that knowledge is professional knowledge. There does not seem, however, to be any large scale research or evaluation projects by either the universities or independent agencies with specific responsibility to provide advice to *Education Scotland* on what is working well in the years of the Broad General Education, what areas need to be addressed, and how the research community can enter into more active partnerships in building the *Curriculum for Excellence*.

While evaluative thinking is part of the Scottish system, through formative assessment and self-review, the evaluation of CfE as a programme has not been done. It is easy to propose but hard to do well. A premature evaluation of CfE when it was only in its early stages of implementation may well have done more harm than good. However, the evaluative evidence did need to be gathered that would serve to inform future direction and in any case it is not possible to argue convincingly five years after CfE implementation in schools began that evaluation would be premature.

The proposed National Improvement Framework has the potential to provide robust evaluative evidence to complement the inspection reports and other forms of evaluation. One of main recommendations below, in addition, is the need to evaluate how CfE is

actually being implemented in schools and communities and for this to be done on an all-Scotland basis, not only in particular local authority areas.

As regards research, we propose as one of our recommendations that the research community can make a clear contribution in helping to innovate schools as learning environments, especially in secondary schools in deprived areas.

Clarifying the meaning of Curriculum for Excellence

Despite CfE having been designed and implemented over the past decade, there remain questions about definition. We think that these should now be clarified. Should it be understood as an integrated wide-ranging package of arrangements and reforms covering equity, teachers and vocational education reforms or instead should it be understood and judged more strictly as a curriculum, assessment and pedagogy package? At first sight, the elasticity of letting it be both may seem welcome flexibility but we are not so positive: in our view, it blurs the task of building positive forward momentum and CfE's standing in the mind of the profession and wider public. It lays CfE open to being the target of dissatisfactions of all kinds, only some of which are about CfE as a curriculum. Flexible definitions of scope get in the way of developing a clear narrative – one of our recommendations. We suggest maintaining the focus on CfE as a curriculum.

Even when CfE refers to curriculum, assessment and pedagogy rather than the broader suite of policies, there are still questions to be resolved regarding its own internal consistency. How clearly aligned can be a curriculum that is both about four capacities, on the one hand, and about extensive Experiences and Outcomes, on the other? This is a fascinating question for curriculum theory but our perspective is altogether more pragmatic. If combining the two in practice is easily grasped and readily put into practice in school communities, including by students and parents as well as school leadership and teachers, then that combination is working; if it is not easily grasped, it argues for a fundamental process of clarification.

With the dual emphasis on quality and equity, we see this as an opportune time to reconsider the name of CfE. We heard more than once the phrase: “*Curriculum for Excellence* is something of a misnomer”. This is problematic and contributes to uncertainty. As regards the curriculum, it may be that “Curriculum for Excellence and Equity” argues for consideration. As regards the broader suite of policies and strategies to which CfE is a central component, “Raising Achievement and Attainment for All” might be appropriate.

Our recommendations

We have developed a very limited number of recommendations, based on three to each chapter. It is deliberately not a shopping list of detailed measures. We focus on a small set of the key changes that we believe can help move the *Curriculum for Excellence* on from ambitious underpinnings to an approach to curriculum, assessment and pedagogy, with supporting leadership and capacity-building, that is a genuine 21st century system to be among those leading the world.

But to achieve the full potential of CfE, building on the valuable consensus and the clear enthusiasm, and for this watershed moment to be “take off point” there is a more ambitious theory of change needed. There needs to be a more robust evidence base available right across the system, especially about learning outcomes and progress. CfE needs to be understood less as a curriculum programme to be managed from the centre

and more a dynamic, highly equitable curriculum being built constantly in schools, networks and communities with a key role for a strengthened “middle”. Our recommendations amount to extending greater powers to all levels for different aspects of the overall drive in a vision of collective responsibility and multi-layer governance.

Quality and equity

Be rigorous about the gaps to be closed and relentlessly pursue “closing the gap” and “raising the bar” simultaneously

As there are many gaps to be addressed, there needs to be clarity about which ones are policy priorities and the evidence needed to show whether they are closing or widening. Having identified the evidence needed, policy and data agencies and the research community should be closely engaged in monitoring change. The tangibility of a measurable gap to be reduced helps to focus especially on inequalities of opportunity between one area and another. With the dual emphasis on quality and equity, however, the aim will often be to raise the bar and close the gap simultaneously; one critical challenge for policy in so doing is that gaps do not actually become exacerbated as standards and expectations for all get raised.

Ensure a consolidated and evidence-informed strategic approach to equity policies

The array of frameworks, guidance, policies and interventions to tackle poverty and its impact on child outcomes is impressive, addressing the needs of many disadvantaged students and communities. With so many measures in place, the review team suggests the value of ensuring that synergies are made and strategic threads developed so that their total effect is more than the sum of the individual parts. It is important to ensure as well that, with so many different programmes and initiatives, they are both efficient and effective. For this, a developed evidence base, drawing on the results of evaluation and research, is essential.

Develop metrics that do justice to the full range of CfE capacities informing a bold understanding of quality and equity

Unless a range of metrics is available that reflects the full ambition of CfE, the nature of quality and equity always risks being reduced to the most readily measurable. Rising attainment measures in terms of qualifications and retention may be regarded as much the reflection of a well-functioning education system as of rising knowledge, skills and capabilities. Direct measures and assessments are therefore needed, especially of but not restricted to the four capacities: Successful learners, Confident individuals, Responsible citizens, and Effective contributors. With the dual emphasis on quality and equity, now might be an opportune time to reconsider the name of CfE (“Curriculum for Excellence and Equity”?).

Decision-making and governance

Create a new narrative for the “Curriculum for Excellence”

We recommend creating a new narrative for CfE and to make it highly visible in Scotland. This would restate longstanding aims but it would also incorporate any shifting emphasis and a trajectory of how CfE will achieve its ambitions. It should be built as far as possible on evidence about the achievements of CfE and new evidence should be absorbed into the narrative as it becomes available. In turn, such a narrative can be used

to help shape the evidence agenda related to CfE effectiveness and equity, and the new National Improvement Framework. CfE in the narrative should focus on the core matters of curriculum, assessment and pedagogy, and avoid the elasticity whereby it may expand to refer to all related strategies. We envisage narrative development to be an act of political leadership, then to be picked up and incorporated into the management of the system, and absorbed by the profession, schools, communities, parents, students, and the public at large.

Strengthen the professional leadership of CfE and the “middle”

Having implemented CfE at the system level, the centre of gravity needs to shift towards schools, communities, networks of schools, and local authorities in a framework of professional leadership and collective responsibility. This means less emphasis on “running” CfE as implementation and consensus-building at the system level towards professional leadership focused directly on the nature of teaching, learning and the curriculum in schools, networks and communities. This might best be realised through a new *forum* aiming at growth, coherence and making connections, rather than a *board* managing the programme from the centre. We believe in reinforcing the “middle”, through fostering the mutual support and learning across LAs, together with schools and networks of schools. If the LAs are given a more prominent role as part of a reinforced “middle”, together with the collegiate activity of schools, networks and communities, then their varied capacity and expertise will need to be addressed through processes of professional accountability.

Simplify and clarify core guidance, including in the definitions of what constitutes the Curriculum for Excellence

Given the ambition that CfE should be built in schools, local communities and networks of educators, it is important to reduce the bureaucracy that can stymie the bold collaboration and innovation on which CfE depends for its success. If the demands made by CfE, qualifications and assessments are not well understood or procedures are too laborious, it is the system that needs to be clarified, not giving users coping strategies or more detailed roadmaps through complex documentation. It will call for strengthening core concepts, clarifying and simplifying system requirements, and making information more readily available. It means making system-wide policy expectations and guidelines more easily accessible, including for inspections; ensuring that national and local quality assurance processes are aligned and proportionate; and regularly reviewing guidance to highlight current advice and remove unnecessary and out-of-date material. Students, parents and local communities should be seen as the beneficiaries of the clarification and simplification process as much as the professionals in the education system.

Schooling, teachers and leadership

Focus on the quality of implementation of CfE in schools and communities, and make this an evaluation priority

No matter how well designed a curriculum may be, this makes little difference unless it is successfully implemented in practice. This calls for full engagement from schools and teachers who are clear about direction and who work closely with learners, families, and communities. It calls for a strong role for the “middle”, covering such organisations as local authorities, teachers’ and head teachers’ associations, and different networks and collaboratives, that each have prime responsibility for implementing certain aspects of

CfE (“leadership from the middle” and echoing recommendations in Chapter 3). A priority area for evaluation is to follow closely how CfE is being implemented on the ground - across the board and not only in exemplary sites. This evaluative knowledge should feed back into policy and practice to ensure that CfE rests on an evidence base that can make it still stronger.

Develop targeted, networked, evaluated innovation in secondary school learning environments to enhance engagement

The ultimate location of quality and change – which all other reforms are seeking to influence – is teaching and learning, in classrooms and out-of-school settings. Learner engagement is a prerequisite of powerful learning and improved outcomes. We suggest consideration of a parallel to the Scottish Attainment Challenge, focused on innovating learning environments in secondary schools in areas with the highest deprivation levels. This is not as an alternative to laying foundations in the early years but to ensure that such foundations can be capitalised on through stimulating and challenging learning environments when students reach secondary school. We also suggest the strong engagement of the Scottish research community in contributing to design, evaluation, and preparation of materials for wider diffusion (and see the lessons derived from work in deprived areas to have long-term benefits across the system as a whole).

Develop a coherent strategy for building teacher and leadership social capital

Teachers who work in cultures of professional collaboration have a stronger impact on student achievement, are more open to change and improvement, and develop a greater sense of self-efficacy than teachers who work in cultures of individualism and isolation. Not all kinds of professional collaboration are equally effective. We suggest that collaboration in improving teaching, assessing CfE, and connecting schools to take collective responsibility for each other’s improvement and results, should be top priorities. In line with current commitments of the Scottish College of Education Leadership, the Standards Frameworks could emphasise even more the importance of and expectations for collaborative professionalism and leadership.

Assessment and evaluation

Develop an integrating framework for assessment and evaluation that encompasses all system levels

It is important to have a coherent and carefully designed framework in order to maximise the quality of the information, to ensure that particular evidence sources are fit for the intended purpose, and to minimise unintended consequences such as reducing rather than promoting teachers’ assessment capacities. The framework needs to integrate the purposes for which assessment and evaluation information are collected, ensure the evidence is high quality, that it is fit-for-purpose with a clear line of sight from the experiences and outcomes in learners’ educational environments. This means integrating processes and systems for learner assessment, teacher and leader appraisal, and school evaluation, together with local authority and national activities and policies. These should be driven by norms of collective responsibility and mutual accountability through processes of genuine inquiry. An important step will be to identify key principles on which to base the new assessment system that would provide transparency throughout the system and criteria for subsequent evaluation of the system itself.

Strike a more even balance between the formative focus of assessment and developing a robust evidence base on learning outcomes and progression

While learner outcomes should not be the only focus of a standards or appraisal system, stronger reference to learners' progress will create improvement. The light sampling of literacy and numeracy at the national level has not provided sufficient evidence for stakeholders to use in their own evaluative activities or for national agencies to identify with confidence the areas of strength. Nor has it allowed identification of those aspects or localities where intervention might be needed. Local authorities have sought to fill this space with their own assessments but this is fragmented. The challenge now is to improve the quality of information on those aspects of CfE that are valued by stakeholders including all the capacities of CfE, while retaining the strongly formative focus (echoing a recommendation in Chapter 2).

Strengthen evaluation and research, including independent knowledge creation

CfE is an ambitious undertaking, requiring research and evaluation not only at the local level but to gain a clear picture at the all-Scotland level. Among the priorities for evaluation should be the quality of CfE implementation and efforts of using school evaluation for improvement. Among the research priorities we see the clear value of a research drive into schools and learning environments that make a significant difference to the engagement and achievement of those facing the greatest social and educational difficulties. (Both points relating to research and evaluation pick up recommendations of the previous chapter.) A strong research and evaluation system requires researchers, those with specialist analytical capacities, policy-makers and practitioners to work together. We believe that strong relationships with the evaluation and research communities and/or with independent and non-government agencies working at some arm's length from political decision-making would benefit Scotland's education system. The need for objectivity and credibility derived from independent sources was also stressed in the 2013 OECD review of evaluation and assessment.

Chapter One

Scotland's "Curriculum for Excellence": Context and structure

This chapter introduces the context in which the Curriculum for Excellence has been developed: the Scottish education system, and a selection of key contextual information - social, demographic, economic, and educational - including, where relevant, international comparative data. It draws heavily on the background reports prepared for this review and the previous OECD review published in 2007, but refers extensively to other sources as well. It gives a brief introduction to the Curriculum for Excellence itself, but saves more evaluative discussion to subsequent chapters. As an introduction, it is the only chapter that does not include review recommendations; however, it has been written as far as possible to present trends and developments that are directly relevant to the ambitions of Scottish educational reform.

The OECD review process

This report and the policy review on which it has been based were commissioned by the Scottish Government. The agreed purpose has been to inform the ongoing development of education policy, practice and leadership in Scotland, by providing an independent review of the direction of the *Curriculum for Excellence* (CfE) and emerging impacts seen in quality and equity in Scottish schooling. It focuses especially on the cycles corresponding to Broad General Education (BGE, i.e. up to student age 15) and the brief was to:

- Highlight key impacts of the approach to developing the curriculum to date.
- Analyse key aspects of education policy and practice in Scotland, and integrate insights from PISA and other evidence from different countries/regions.
- Highlight areas where further change or development could add value to an ongoing programme of educational improvement.

The timing and focus have been chosen at a key juncture in the development of CfE: actual implementation in schools after a long development period began in 2010 and the first cohort of CfE secondary school students reached the end of their “Broad General Education” in 2013. It is thus timely to review progress in relation to the years covered by BGE. On the other hand, the first CfE cohorts of secondary learners are still undertaking the Senior Phase and the new National Qualifications, prepared by the Scottish Qualifications Authority (SQA), had their first candidates in 2014 and the qualifications will only be implemented in full by 2016 (and it will take a good deal longer before pupils who have been right through their schooling with CfE from the early years come to the end of their senior phase in the 2020s).

Box 1.1. The OECD education policy review process

OECD Education Policy Reviews are tailored to the needs of the country and cover a wide range of topics and sub-sectors focused on education improvement. The reviews are based on in-depth analysis to arrive at recommendations, using diverse available sources of data such as policy documents and evaluations in the country in question, PISA and other internationally comparable statistics, and research. They draw on expert analysis of the key aspects of education policy and practice examined, incorporating policy insights from other countries, and include one or more review visits to the country by an OECD team of experts with specific expertise on the topic(s) being investigated. They listen closely to stakeholder opinion.

A typical Education Policy Review consists of five phases, usually undertaken over 8 to 12 months depending on the scope of the review: 1) definition of scope; 2) desk review (including a detailed background report prepared by the system) and preliminary visit to the country; 3) main review visit (in this case a week); 4) drafting the report; and 5) launch of the report. The methodology aims to provide analysis and recommendations for effective policy design and implementation, tailoring comparative analysis and recommendations to the specific country context.

Education Policy Reviews are conducted in OECD member countries and non-member countries, usually upon request by the countries. For more information: www.oecd.org/edu/policyadvice.htm.

This review is part of OECD's efforts to strengthen the capacity for education reform across OECD member *countries*, partner countries, and selected non-member countries and economies (Box 1.1 gives a summary of the approach). An OECD policy review provides an invaluable occasion to take a detached viewpoint on developments in a particular system, combining soundings of key stakeholders and analytical material about the system and drawing on international comparisons, examples and trends. The review is informed by patterns and practices in some of the most interesting comparable education systems.

Scotland's population, demographics and languages

Scotland makes up approximately a third of the mainland area of the United Kingdom, bounded to the south by England, to the east by the North Sea, and by the Atlantic Ocean to the west and north. The sparsely populated Highlands make up the north and northwest of mainland Scotland, the central belt accounts for the bulk of the population (Figure 1.1), and the Borders combine farmland and high peat moors. Scotland also has a large number of islands, many off the west coast and with Orkney and Shetland to the north.

Contrary to an impression that might be given by the empty beauty of the Highlands or the Western Isles, Scotland is a comparatively urbanised country among those that make up the OECD (Figure 1.2). The proportion living in major cities is higher than but not far from the OECD average at about half. The major differences are the comparatively high proportions in Scotland living in towns other than the major cities (41% compared with 27%), with a relatively small share (10%) in rural areas compared with a quarter who do so across the OECD as a whole. These urban/rural environments impact in a variety of ways on the nature of community, local economy, access to services and educational provision, and they impact directly too on educational indicators like attainment.

Scotland's overall population stood at around 5.35 million people in 2014 – 8% of the UK population and higher than at any time in its history - an increase of just over 5% over the foregoing decade. Immigration is now the primary force driving population growth, with in-migration exceeding out-migration by approximately 10 000 people between mid-2012 to mid-2013. The population increase has also been driven by an upturn in the number of births, (with higher births among the incoming populations), alongside a reduction in the annual number of deaths and a continuing rise in life expectancy for both men and women. Scotland's fertility rate - the number of births expressed as a ratio to the number of women aged 15-49 - is very near to the OECD average (at around 1.7) (OECD, 2015a). Having decreased to as low as 1.5 in 2002, fertility increased modestly until 2008 to reach 1.8 but has since dropped back slightly again (Office of National Statistics, 2014).

There has in general been an ageing of the population over recent decades with the number of those aged 75+ predicted to increase by 86% in the next quarter century. This is particularly marked in certain of Scotland's rural areas (Scottish Government, 2010). At the same time, the number of children and young people under 16 years of age fell by 4% in the past decade. Drawing any direct implications for the demand for education and school services is made difficult by longer-term projections suggesting that this population might grow again and still more by the sensitivity of the numbers to migration, which has varied more sharply than the longer-term demographics of births and deaths.

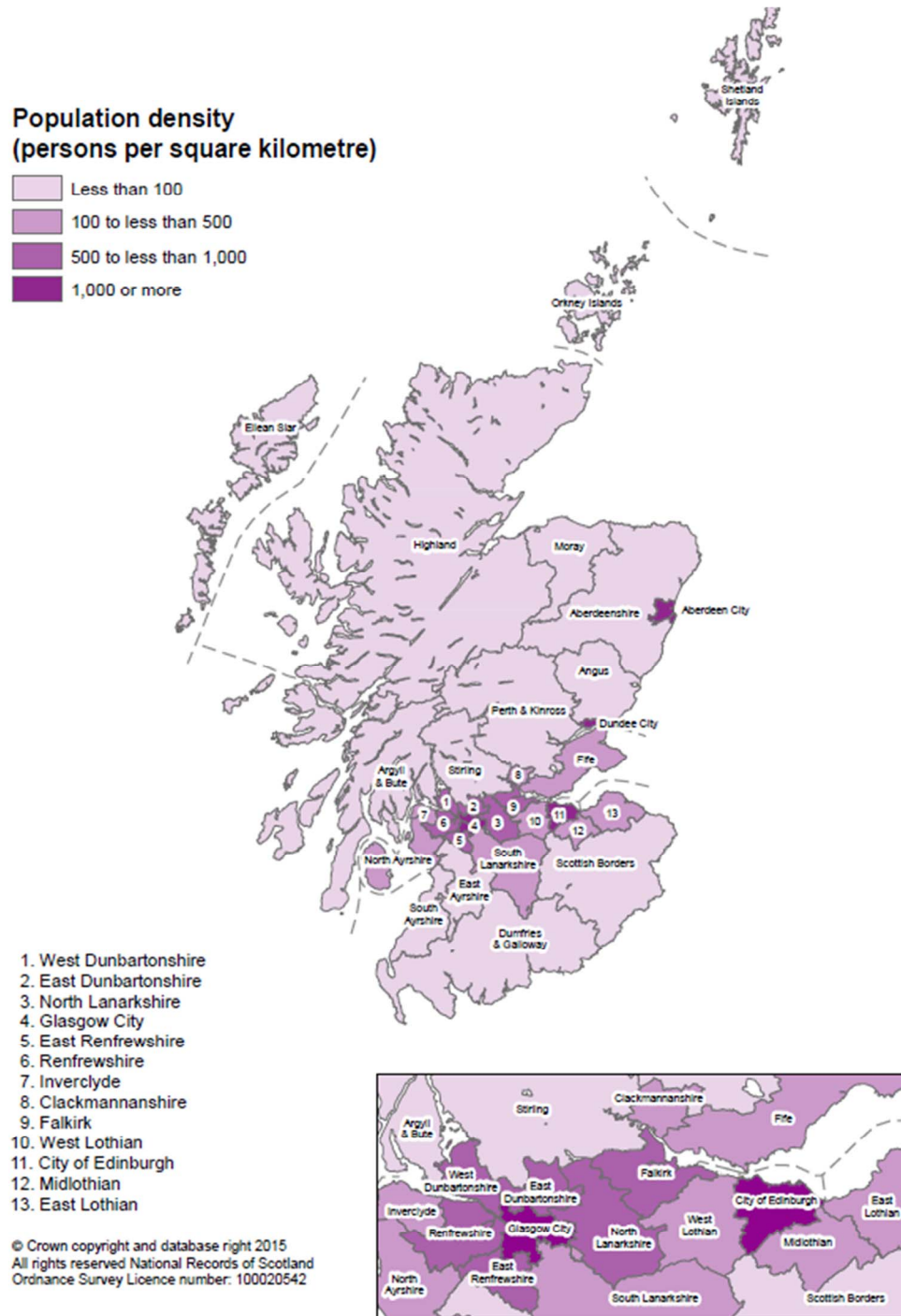
The ethnic minority population of Scotland has grown rapidly over the last decade and diversity in Scottish schools is increasing as a result. In 2011 the ethnic minority population stood at just over 200 000 - a doubling from 2% to 4% of Scotland's total population – with every reason to expect it to have continued to grow since then. The pupil census also reveals that the ethnic minority school population doubled from 3% of the school population in 2003 to 6% in 2013 (Scottish Government, 2014). It is not surprising that many languages are now spoken in Scotland's schools and communities, and 2013 estimates puts the number of languages spoken at home of pupils in publicly-funded schools at around 140. After the very large majority of home English speakers, the next most spoken languages at home are Polish, Urdu and Punjabi.

Of the languages spoken, only English, Gaelic and Scots are indigenous. Gaelic has been a continuing element in Scottish heritage, and now has official recognition. The 2011 Census recorded 58 000 Gaelic speakers in Scotland, marginally down on the numbers recorded in 2001 but still a significant slowing of the historical decline. The 2011 Census also, for the first time, provided information on Scots speakers. Scots has a number of regional varieties and some overlap with English; although widely spoken, it has often been regarded more as a language of home and community and not encouraged in education and public life. In fact, over 1.5 million people speak Scots in some form.

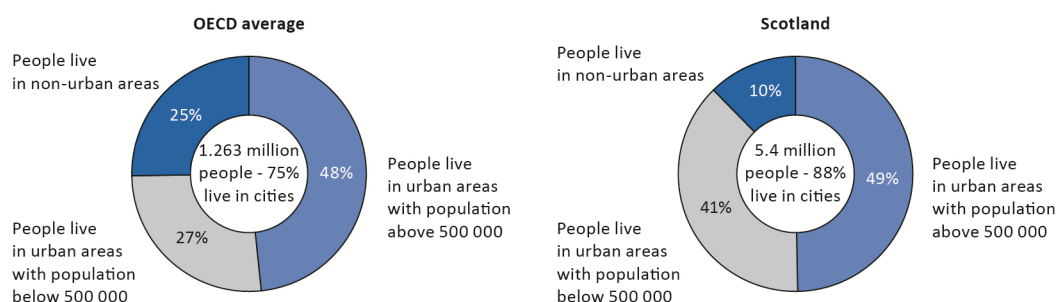
The economic and social context – opportunities and challenges

The structure of Scotland's economy is similar to most advanced economies, with services accounting for the bulk of output and employment (around 70% and 80% respectively). Key sectors in Scotland include: oil and gas; food and drink; energy (particularly a growing renewables sector); financial services; tourism; life sciences; the creative industries...and education. Whereas manufacturing has suffered a general decline across OECD economies over recent decades, this has been less pronounced in Scotland than in many others as it still accounts for a fifth of Scottish output. There are regional differences in the structure of the Scottish economy. These may sometimes be marked: for example, in Edinburgh the financial services industry accounts for over a third (35%) of employment in contrast with Aberdeen where it is less than 2%, but there production industries (primarily oil) make up over 40% of employment.

At the time of writing, Scotland is enjoying a relatively positive economic outlook. The Scottish economy grew by 3% in 2014, which is higher than the UK aggregate. It represents around 9% of the UK GDP. Ranked along with the other 34 OECD economies and including oil, Scotland's GDP per head is above the median in 14th place. The Scottish economy is forecast to continue to grow above 2% of GDP for the foreseeable future, albeit at a slightly slower pace. The recovery from recession has been reflected in the labour market where employment has been rising and unemployment falling. Scotland currently has the highest employment rate of the four countries in the United Kingdom: a rate of 74.1 % (Scottish Government, 2015a), one of Scotland's strongest since 2008 with much of the recent increase driven by improvements in female employment (raising inter alia the issue of gender differences in educational attainment to which we return in Chapter 2).

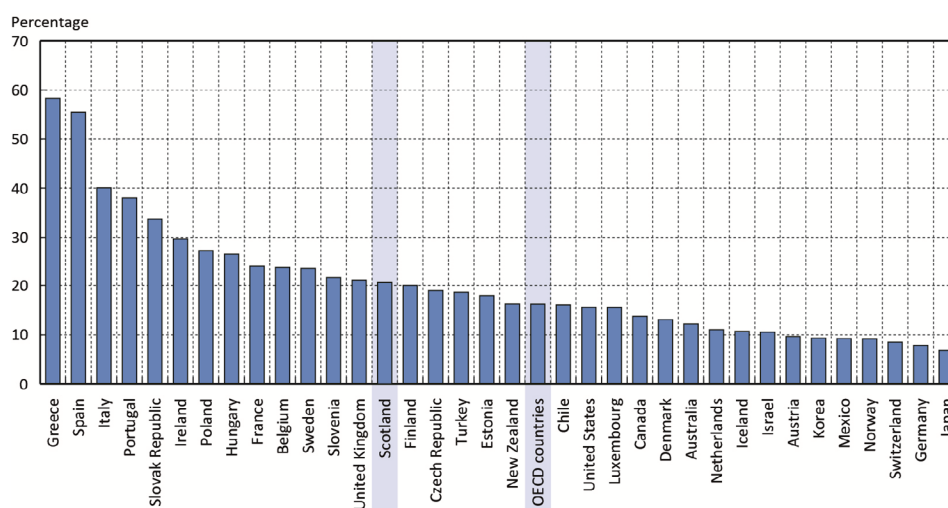
Figure 1.1 Population density in Scotland by Council area: 2014

Source: (C) Crown copyright. Data supplied by National Records of Scotland.

Figure 1.2 The distribution of Scotland and the OECD population by urban and rural locations

Source: OECD, Regional Demographic statistics.

The overall unemployment rate in Scotland is down substantially from its 2011 peak of 7.5% to reach 5.9% in 2015, which is the lowest among the constituent UK economies at the time of writing (Office for National Statistics, 2011 and 2015). The picture is not uniform across the population, however, and unemployment among young adults has been markedly higher than among any other working-age group. The unemployment rate among the 16-24-year-old age group stood at 20.6% in 2013. As seen in Figure 1.3, this proportion was slightly lower but broadly consistent with that for the United Kingdom as a whole. There are European countries, such as Greece, Spain, Italy and Portugal, where it was dramatically higher. But Scottish youth unemployment still stood above the OECD average in 2013, and well above the group of countries, including the German-speaking European countries of Austria, Switzerland and Germany, where it has come down to around 10% or lower.

Figure 1.3 Youth unemployment rates in OECD countries: 2013

Note: Statistics from ONS youth unemployment category 15-24 years (data collected between October 2012 and September 2013) whereas the OECD statistics youth unemployment category is 16-24.

Source: for OECD countries, OECD Labour Force Statistics. For Scotland: Scottish Government (2015), *OECD-Scotland Education Policy Review: Country Background Report*, Scottish Government.

Social progress, social challenges

A range of indicators that help to define the social context in which CfE is being developed is presented in Table 1.1, permitting comparisons between Scotland, a range of comparator countries, and the overall OECD averages. With the exception of the United States (added given its general interest as a point of reference), the countries share certain features with Scotland (size, culture, ambition) that make them relevant for comparison purposes rather than only referring to the overall international average.

There are some clearly positive indicators here about Scottish society. In housing, there are 1.9 rooms per person in Scotland which is well above the OECD average of 1.7 (a higher figure indicating more space), but down on the other comparator countries in the table except the rest of the UK. It is a relatively safe country, judging by the number of homicides per 100 of the population which is lower than the OECD average. Scotland is somewhat above the OECD average for Internet broadband access, and at a similar level to Canada and above New Zealand and the United States. Civic engagement is highly relevant for Scotland's Curriculum for Excellence given that two of the four core capabilities underpinning the curriculum are "responsible citizens" and "effective contributors". Voting levels stand very near to the OECD average, and well up on Canada and the rest of the UK. These data predate the 2014 referendum which galvanised such high levels of interest and engagement and which attracted much higher levels of turnout.¹ (A recent MORI poll surveying young people in the different parts of the UK reported the highest levels of "meaningful social action" to be in Scotland, Ipsos/MORI, 2014). The Scottish population is relatively well educated with 83.5% who have attained at least upper secondary education, above the OECD average of 77.4% and behind only the North American countries of Canada and the United States in Table 1.1.

Equity and equality are key aspects of Scottish education policy, and ones in which social trends are highly relevant. Regarding income inequality, the Gini coefficient suggests that Scotland is very close to the overall OECD average and measured poverty levels (including child poverty rates) are somewhat lower than across the OECD area. Yet, despite the relatively positive picture portrayed by these international comparisons and despite the welcome labour market signs linked to economic recovery, there are significant numbers and growing incidence of low-income households in Scotland. In 2013/14, 14% of the Scottish population were living in relative poverty (below 60% of median income) before housing costs, though this was a proportional decrease of 13% over 2012/13 (at 16%). Even more relevant for schooling, perhaps, is the level of child poverty and this stood at nearly 1 in 7 (14%) of Scottish children in 2013/14 (below 60% of median income), though again down on the previous year when it had stood at 19% in 2012/13 (Scottish Government, 2015b; 2015c). This provides important context to the drive in Scotland to address the gaps in educational attainment.

The positive social indicators notwithstanding, life expectancy and mortality rates remain real problem areas for Scotland: they are worse than the OECD averages and indeed of all the other countries included in this table (including the United States). Despite health having become such a priority in Scotland, a recent Lancet study showed Scotland to have been at the bottom among 19 countries² in mortality and life expectancy both at the beginning of the time period studied in 1990 and still in 2013 (Newton et al., 2015). This continuing cause for concern informs the high priority given by Scottish policy to health and well-being in education, and these feature prominently in the *Curriculum for Excellence* as outlined later in this chapter.

Social attitudes to education

Measured perceptions of the education system do not show levels of dissatisfaction that would suggest any widespread disenchantment with schools, nor do they suggest changes over time to support growing belief in education's quality. There are neither grounds for rejoicing nor despair. The Scottish Household Survey (Scottish Government, 2015d) reports that over 80% of the adult population were "very" or "fairly satisfied" with local schools, and this rises to 85% for the population in the 20% most deprived areas. This conforms with the general international finding of inverse relationships between actual attainment levels and positive attitudes (OECD, 2006). Adults in rural areas tend to be less positive yet, as we will see in Chapter 2, attainment in rural areas is among the highest.

The Scottish Social Attitudes Survey suggested that in 2011 about 30% of Scottish adults believed that the quality of education had "stayed the same" over the previous year, though more (26%) believed that quality had "fallen a lot" or "a little" over that time than those believing it had "increased a lot" or a "little" (20%), (Scottish Government, 2012). At the same time, a steadily growing figure (24% in 2011 compared with 19% in 1999) confessed simply not to know, which might suggest its own need for greater information and transparency. The most positive year in the series was 2006; this was when the new framework for the *Curriculum for Excellence* was announced and it is possibly associated with a tide of positive attitudes.

Scotland's own political and education system

In 1707, the Act of Union abolished the separate Parliaments for Scotland and England, and created a single Parliament at Westminster in London. But Scotland retained many distinctive features, including a separate church and legal system. Administrative devolution for Scotland was established 130 years ago in 1885 when the Scottish Office was created, headed by a UK Cabinet Minister, the Secretary of State for Scotland. This Office assumed responsibility for many of the issues which in England and Wales were dealt with by departments in London, such as health, education, justice, agriculture, fisheries and farming.

Table 1.1 Well-being indicators: Scotland, OECD and selected countries

Dimension	Housing	Education	Health		Safety	Civic engagement	Access to services	Inequality and poverty			
Indicator	Number of rooms per person	Share of labour force with at least secondary education	Life expectancy at birth	Mortality rate	Homicide rate	Voter turnout in general election ¹	Share of households with Internet broadband access	Gini coefficient ²	Overall poverty rate (poverty line 50%) ³	Child poverty rate ⁴ (poverty line 50%)	Overall poverty rate (poverty line 60%)
Unit	Ratio	%	Years	Per 1 000 inhabitants	Per 100 000 inhabitants	%	%	Index	%	%	%
Canada	2.5	88.8	81.5	7.1	1.6	61.4	81.5	0.32	11.8	14.4	19.1
Netherlands	2.0	75.2	81.2	7.9	0.9	75.4	84.7	0.28	7.9	10.7	14.4
New Zealand	2.2	73.3	81.2	7.8	1.0	74.2	75.0	0.33	9.9	12.8	19.1
Norway	2.0	81.32	81.4	7.7	0.6	78.2	84.7	0.25	8.1	5.9	13.8
United Kingdom	1.9	81.9	80.9	7.8	1.1	66.5	84.3	0.35	10.5	10.4	17.4
United States	12.4	86.0	78.7	8.5	4.7	68.0	72.0	0.40	17.6	19.6	24.6
Scotland	1.9	83.5	78.5	9.2	1.4	71.1	81.7	0.30	10.0	10.0	14.0
<i>OECD average</i>	<i>1.7</i>	<i>77.4</i>	<i>80.0</i>	<i>8.3</i>	<i>2.2</i>	<i>70.1</i>	<i>71.0</i>	<i>0.31</i>	<i>11.2</i>	<i>13.3</i>	<i>17.9</i>

Notes: 1) Voter turnout rates for the UK and Scotland refer to the May 2015 General Election.

2) The Gini coefficient takes values between 0 (total equality where everyone has the same income), and 1 (total inequality where all income goes to one person).

3) The poverty thresholds are 50% and 60% of median disposable income. In Scotland, the rates are before housing costs.

4) The child poverty rate is for ages 0-17.

5) The latest inequality and poverty data refer to 2013/14 for Scotland; 2013 for the Netherlands; 2011 for Canada and 2012 for the other countries.

Sources: OECD Regional Database; for voter turnout rates in the UK and Scotland: Electoral Registration Officers on the Electoral Commission's behalf, by the Elections Centre at the University of Plymouth. For OECD countries poverty and inequality: OECD (2015), *In It Together - Why Less Inequality Benefits All*, Paris. For Scotland, poverty and inequality: HBAI dataset, DWP; and for 50% of median income: www.gov.scot/Publications/2015/03/4673/3.

A major constitutional change took place in July 1999 with the establishment of a new Scottish Parliament and Executive. A significant amount of legislative power has been devolved to the Scottish Parliament in Edinburgh including education, albeit that Scotland has a long tradition of organising its own education system, as described below. The other key devolved sectors of legislation and government are: health; housing; many aspects of transport; local government; law and order; social work; agriculture; environment, forestry and fisheries; arts and sport; and economic assistance and industry. Very widespread attention was attracted by the independence referendum in September 2014, which ultimately resulted in a “No” vote but also in commitments to extend further powers to Scotland. The UK Parliament continues to govern foreign policy, defence and macro-economic policy and, as part of the UK, Scotland has been in the European Union since 1973.

The Scottish Parliament has 129 Members, elected on a mix of first past the post and proportional representation through party lists. The main political parties represented in the Scottish Parliament are the Scottish National Party, Labour, Conservative, Liberal Democrat and Green Parties. The current administration in the Scottish Parliament is the Scottish National Party, having been elected as a majority government in 2011 following their period as a minority government from 2007 to 2011. The Scottish population also elects 59 members to the United Kingdom Parliament; the Scottish National Party currently dominates the members returned from Scottish constituencies to the UK parliament in London (at the time of writing, 56 out of the 59), bringing Scotland still more into the public and international eye.

The Scottish Government is headed by the First Minister who, with the approval of Parliament and the Queen, determines portfolios and appoints other ministers. The Cabinet Secretary for Education and Lifelong Learning has overall responsibility for Scottish education, with other ministers sharing responsibilities on specific areas. The Scottish Government permanent staff are civil servants headed by the Permanent Secretary. The 32 Local Authorities, run by councils elected every four years, deliver a wide array of services including schools, housing and social work, and are committed to pursuit of national educational objectives.

The long Scottish education tradition

Education in Scotland has a long and distinguished history. Schools run by the Church existed in the Middle Ages and by the end of the 15th century Scotland already had three universities: St Andrew's (established in 1411), Glasgow (1451), and Aberdeen (1495). Several Acts were passed over the 17th century encouraging the establishment of schools; the final such Act passed in 1696 may well have been the world's first national education act and provided inter alia for a school in every parish. With many schools being established over the years, by the mid-19th century a very large proportion of the population in many areas of Scotland was literate. The 1872 Education (Scotland) Act stands out among the landmarks of the 19th century as this created a Board of Education for Scotland, established the responsibility of parents to ensure that all children aged between 5 and 13 received education, and provided for funding to this end from the local property tax (Scottish Government, 2007).

Scottish education went along quite a distinct path of development compared with the educational system of England and Wales. The most striking developments in the period up to 1945 were the establishment of a single external examination system; the founding of more than 200 new secondary schools between 1900 and 1914; and the creation of 36

local education authorities in 1918 to replace the unwieldy system of almost a thousand school boards.

Major reports on education in Scotland were published immediately after WWII whose recommendations, often not put in place until the 1960s, laid the foundation of the present system. A major aim was to provide educational opportunity for all pupils. Changes in the public examination system made it more accessible to a larger number and led to consequent changes in curriculum. In 1977, two landmark reports were published, one on the curriculum (The Munn Report) (Scottish Education Department, 1977a) and the other on assessment (The Dunning Report) (Scottish Education Department, 1977b). During the 1980s, school boards were established in every education authority school in Scotland (except nursery schools), with elected parent and staff members and members co-opted from the local community.

The current school system

Education is provided at pre-school, primary and secondary levels in both mainstream and special schools. There is not an exact fit between the duration of Broad General Education (BGE) within the overall 3-18 CfE curriculum and the duration of compulsory schooling from ages 5-15 until age 16. BGE includes early learning before the primary years as well as the first year of the primary schooling P1 in the “early learning” phase. The remaining years of primary schooling (P2-P7) comprise the first and second phases of BGE, with the first three years of secondary education S1 – S3 comprise the third and fourth phases. The final year of compulsory school departs from the breadth of BGE to permit the student to specialise and gain qualifications in S4. Together with S5 and S6, this makes up the senior phase (see Figure 1.4).

Figure 1.4 Overview of the Scottish education system

ISCED levels				ISCED 0		ISCED 1							ISCED 2				ISCED 3			
						Compulsory schooling											Post-compulsory			
Ages	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
Stages					P1		P2	P3	P4	P5	P6	P7	S1	S2	S3	S4	S5	S6		
				Pre-school		Primary							Secondary							
Curriculum Level					early		first				second			third and fourth				senior phase		
				Broad General Education																

Source: Based on Scottish Government (2015), *OECD-Scotland Education Policy Review: Country Background Report*, Scottish Government.

Around 385 000 pupils attended primary schools in 2013 in Scotland, with another 285 000 in secondary education, either in the compulsory cycle or in the senior stage (see Figure 1.5). Students can leave school at age 16 or stay on for one or two more years to undertake a range of qualifications in S5 and S6, whether in schools or through colleges and third sector organisations. Over three-quarters (78%) of S4 students advance to the post-compulsory year S5 (Figure 1.5). In September 2013, approximately 673 000 pupils were catered for in just over 2 500 schools with over 50 000 (51 078) full-time equivalent teachers. Usually children spend seven years in primary school (P1-P7) and at least four years in secondary school (S1-S4). Local authorities have the discretion to vary this, and in some rural areas slightly different models exist as where, for example, P1 to S2 provision is covered by the same school. Over 100 000 young children under the age of five are in the Early Learning phase of their education, which is an integral part of Broad

General Education. Education under age 5 is not compulsory even though the quasi-totality of 3- to 4-year-olds are registered.

Numbers in school in Scotland had been declining since the mid-1990s, but an increase was posted in 2013 and that continued in 2014 with a 0.5% rise in publicly-funded schools to 676 955 pupils, with numbers projected to continue rising.

It is a fundamental principle of the public education system in Scotland that education is free at the point of delivery to the pupil and their families. The principle of provision of free (though not compulsory) education has been extended to children aged 3-4. There are 370 state-funded denominational schools, which are mainly Roman Catholic and have been integrated into the state sector for the past hundred years. They teach the Curriculum for Excellence and enter candidates for SQA examinations. The Bishops' Conference of Scotland through the Scottish Catholic Education Service sets its educational policy in partnership with local authorities and the Scottish Government.

There are around 100 registered private independent schools in Scotland. Apart from funding limited number of places at specialist schools (music, additional support needs), there is no public funding for these private institutions. Independent schools provide primary, secondary and all-through provision to around 30 000 pupils. They may offer Scottish qualifications, and some offer English or international qualifications, with the schools deciding which curriculum and examination system to follow (which may be CfE). Around two-thirds of those attending independent private education do so in the major cities of Glasgow, Edinburgh and Aberdeen. In Edinburgh, which has the greatest concentration of independent schools, more than a quarter of secondary pupils are in the independent sector in contrast with approximately one in twenty throughout Scotland as a whole.

Early Learning and Childcare (ages 3-4), Primary Education (ages 5-12) and Secondary Education (ages 12-18) are all the responsibility of Local Authorities, from the school buildings to the delivery of the curriculum. There are 32 Local Authorities, of which two jointly manage their schools. At the same time, crucial responsibility for policy and leadership lies with the Scottish Government as summarised in Box 1.2. Education Scotland is an especially influential body, with wide-ranging responsibilities in relation to the Curriculum for Excellence; it was established as recently as 2011 through combining the inspection service with the improvement, curriculum, and professional development agency (formerly Learning and Teaching Scotland). Other key bodies are also described briefly in Box 1.2. The governance of reform and of CfE is so critical to this review that it warrants its own chapter (Chapter 3).

Education is an important item of public expenditure in Scotland and third in size behind social protection and health. Average expenditure per primary pupil in 2013-14 was GBP4 899, while corresponding average expenditure per secondary pupil was GBP 6 738. Two thirds of school education expenditure is on staffing costs, and over half of the total (54%) is on teachers. The Audit Scotland report from mid-2014 which surveyed expenditure and attainment across the different local authorities showed that already over the three years up to year 2012-13 school expenditure had reduced by 5% in real terms. This clearly adds to the challenge of raising attainment and quality as discussed in the next chapter.

The Scottish Government provides around three-quarters of all local government revenue, with the remainder coming from business rates and local residence taxes. Since 2007, education funding has been rolled into the local government settlement, with school

funding no longer ring-fenced: it is for local authorities to prioritise funding and allocate budgets, including to schools. However, some additional targeted funding is provided by the Scottish Government, and this has included for implementation of CfE and, more recently, in programmes specifically to raise attainment.

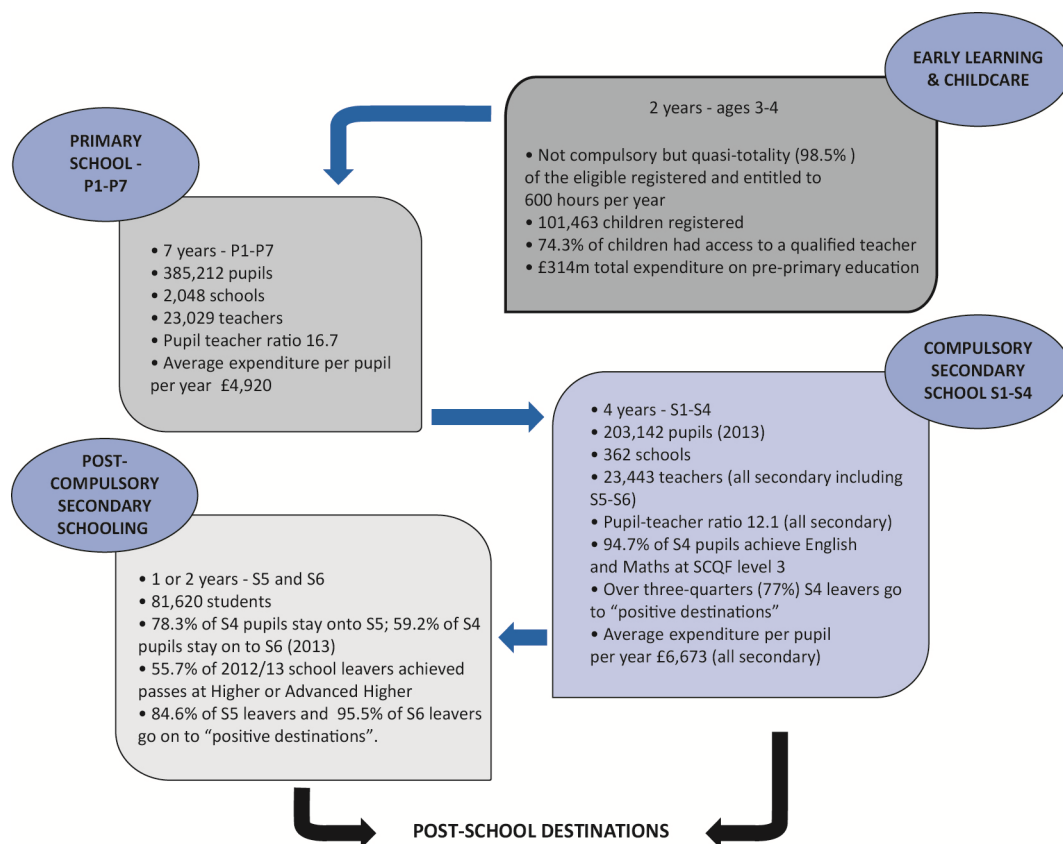
The Curriculum for Excellence (CfE)

The Curriculum for Excellence emerged soon after 2000 as part of a major debate on the future and aims of education. Opinions may and do differ on the extent to which it is radically new and unique to Scotland (see e.g. Priestley, 2010). Whatever the comparison and viewpoint, CfE represents an ambitious and important departure that has sought to develop a coherent 3-18 curriculum around capacities and learning, rather than school subjects, taking a different approach to assessment and national prescription from what was in place before. There is a foundation of Broad General Education up to age 15, incorporating early learning from age 3 years, combined with a flexible senior phase when various academic and vocational qualifications can be achieved.

The ambition of CfE and its importance in Scottish schooling is given perspective by the many years it would take to put in place, from its official beginnings in 2002 to foreseen completion with senior qualifications in place in 2016. The curriculum in Scotland has traditionally been implemented through a consensual approach rather than through legislation. Therefore, CfE and the content of the Broad General Education phase are not governed by statute, apart from a stipulation about religious observance from which parents may, in any event, choose to withdraw their children. Building consensus, as well as designing and creating extensive frameworks, reference materials, and professional engagement, have thus been part of deliberate policy and that necessarily takes its own time to put in place.

Moreover, it has been viewed as necessary to anchor CfE in a wider set of parallel reforms that may to a greater or lesser degree be seen as part of CfE but which are closely aligned with it. These too have necessarily taken time, both to gain the customary consensus and to implement the changes. Assessment practices have been significantly reformed and are discussed in Chapter 5. Teacher education was subject to wide-ranging review spanning the whole teaching career resulting in the publication of the Donaldson report “Teaching Scotland’s Future” in 2011 whose recommendations have been widely adopted. A new Leadership College was only recently established in 2014. There are continued high profile strategies aimed at reducing the social gaps such as the Scottish Attainment Challenge, as discussed in Chapter 2.

Figure 1.5 Phases and stages in the Scottish school system



Source: Scottish Government (2015), *OECD-Scotland Education Policy Review: Country Background Report*, Scottish Government.

So integrated is CfE into schooling in general that it raises the question of how widely or narrowly the *Curriculum for Excellence* should be understood. Whether it is understood as an umbrella for an integrated package of arrangements and reforms or instead as more strictly as curriculum policy is an important issue for the success of the strategy and we come back to this question in Chapter 3.

The main dimensions of CfE

The *Curriculum for Excellence* aims to promote a holistic understanding of what it means to be a young Scot growing up in today's world and to optimise the contribution of education to the wider vitality of Scotland's economy, society and culture. CfE privileges learning - what young people learn and what they learn how to do - rather than the negotiation by students through particular programmes and subjects. Any simple capsule description will ignore its complex multi-dimensionality, and it risks confounding the aspirational ideal with the variety of implementation on the ground. This is particularly relevant as regards CfE as it has deliberately moved away from prescription towards a curriculum that has to be built in the different learning settings all over Scotland.

In this chapter, therefore, we limit our description to the established official main features and return to more subjective interpretation and detail in later chapters. This

description needs to be done in some detail, so as to make *Curriculum for Excellence* comprehensible to all readers.

Box 1.2 Main bodies in the Scottish system

- **The Scottish Government** develops national policy and sets the overall direction of education policy.
- **Local authorities** have the duty to provide school education for every child of school age; they also have a duty of improvement as an Education Authority and on behalf of their schools.
- **Education Scotland** combines the roles of national inspectorate and of curriculum development, created in 2011 with the merger of Her Majesty's Inspectorate of Education (HMIE) and Learning and Teaching Scotland. It is responsible for inspecting schools, providing guidance on developing the curriculum at local level, and for organising an extensive range of professional learning opportunities and the sharing of effective practice.
- **The Scottish Qualifications Authority:** (a) devises qualifications; (b) determines the entitlement of individuals to qualifications and to award and record such a qualification; (c) reviews and develops qualifications; (d) approves establishments as suitable for presenting persons for SQA qualifications; and (e) arranges, carries out or assists the assessment of persons in education and training.
- **The Scottish Credit and Qualifications Framework Partnership** manages the Scottish Credit and Qualifications Framework (SCQF). This sets out the level and type of qualifications that are available, integrating qualifications from a variety of sources into a single framework. It is a way of comparing the wide range of Scottish qualifications, covering achievements from school, college, university, and many work-based qualifications.
- **The General Teaching Council for Scotland** is the independent professional body which sets teachers' professional standards and accredits Initial Teacher Education. It also oversees a number of key programmes in induction, professional learning, and student placement.
- **The Scottish College for Education Leadership (SCEL)** was created in 2014 with responsibility for developing leadership and programmes for the Scottish education system.
- **Skills Development Scotland** is the national body charged with developing skills in individuals and business, and works in partnership with schools.

Source: Scottish Government (2015a), *OECD-Scotland Education Policy Review: Country Background Report*, Scottish Government.

The four capacities: attributes and capabilities

At the heart of the generalised understanding of CfE are the four capacities that are regarded as fundamental to being a citizen and educated person in Scotland: i) Successful learners, ii) Confident individuals, iii) Responsible citizens, and iv) Effective contributors. Attached to each of these capacities is a set of attributes and capabilities, with 12 attributes and 24 capabilities across the four (Figure 1.6).

It is important to ask, having given these capacities (and their associated attributes and capabilities) such a primary place in Scottish schooling, how they are being fostered and understood by all concerned, and how they fit within the other dimensions outlined next. However that is answered, there is little doubt that the four capacities have become ingrained in the everyday language of the Scottish education system.

Experiences and Outcomes

Expectations of how learning should be experienced, the corresponding outcomes it should result in, and progression through the whole curriculum at different ages and stages - are set out in what are called “*Experiences and Outcomes*”. These recognise the importance of the quality and nature of the learning *experience* in developing attributes and capabilities and in achieving active engagement, motivation and depth of learning. An *outcome* represents the learning that is to be achieved through particular learning experiences.

Figure 1.6 The “attributes” and “capabilities” of the four main CfE capacities

Successful learners	Confident individuals	Responsible citizens	Effective contributors
Attributes <ul style="list-style-type: none"> • Enthusiasm and motivation for learning • Determination to reach high standards of achievement • Openness to new thinking and ideas Capabilities <ul style="list-style-type: none"> • Use literacy, communication and numeracy skills • Use technology of learning • Think creatively and independently • Learn independently and as part of a group • Make reasoned evaluations • Link and apply different kinds of learning in new situations 	Attributes <ul style="list-style-type: none"> • Self-respect • A sense of physical, mental and emotional well-being • Secure values and beliefs • Ambition Capabilities <ul style="list-style-type: none"> • Relate to others and manage themselves • Pursue a healthy and active lifestyle • Be self-aware • Develop and communicate their beliefs and view of the world • Live as independently as they can • Assess risk and make informed decisions • Achieve success in different areas of activity 	Attributes <ul style="list-style-type: none"> • Respect for others • Commitment to participate responsibly in political, economic, social and cultural life Capabilities <ul style="list-style-type: none"> • Develop knowledge and understanding of the world and Scotland's place in it • Understand different beliefs and cultures • Make informed choices and decisions • Evaluate environmental, scientific and technological issue • Develop informed, ethical views of complex issues 	Attributes <ul style="list-style-type: none"> • An enterprising attitude • Resilience • Self-reliance Capabilities <ul style="list-style-type: none"> • Communicate in different ways and in different settings • Work in partnership and in teams • Take the initiative and lead • Apply critical thinking in new contexts • Create and develop • Solve problems

Source: Education Scotland (2008), *Curriculum for Excellence, Building the curriculum 3: A Framework for Learning and Teaching*.

In formulating these explicitly, CfE has responded to the need for exemplification. It has sought to move beyond the abstract definitions of capacities, curricular areas,

principles and progression to translate these into concrete learning experiences and outcomes. Because of the exemplification of the learning experience the “Es and Os”, as they are known, have more to say about teaching than a standard curriculum framework would, and in general they and other supporting documentation positively endorse the value of active pedagogies.

The “Es and Os” are set out in a substantial reference resource of 300+ pages (Experiences and Outcomes for all Curriculum Areas). They are structured in terms of both “curriculum areas” and “curriculum phases” (see next), and with explanatory texts and introductions. By way of illustration, an example of a single sub-division (known as a “component”) of one curriculum area (in this case on technological developments) is found in Table 1.4. The introductory statements within the frameworks for the Experiences and Outcomes provide broad aims of learning within the curriculum area and act as a reference point for planning.

Curriculum levels, phases and stages

The Es and Os are set out in lines of development which describe progression is indicated through *curriculum levels*, with approximate ages and stages in the schooling system; they are divided into five different levels, including the senior phase, though these are not intended to act as ceilings to challenge and performance.

Table 1.2 The levels and stages as the framework for the CfE “Experiences and Outcomes”

Level	Stage
Early	The pre-school years and P1 (age 3-5 years).
First	To the end of P4 (age 6-8 years, but earlier or later for some).
Second	To the end of P7 (age 9-11 years, but earlier or later for some).
Third and F	S1 to S3 (age 12-14 years, but earlier for some). The fourth level broadly equates to SCQF level 4.
Senior Phase	S4 to S6 (age 15-18 years, but earlier for some) and college or other means of study.

Following Broad General Education, all young people are entitled to a Senior Phase of education, which takes place broadly between the ages of 15 and 18. The Senior Phase, which lies outside the remit of this review, is intended to build on each learner’s Broad General Education and the CfE principles should continue to underpin the experience of all young people. This phase offers young people the opportunity to extend and deepen their learning as they build a portfolio of qualifications which recognises their learning; enables them to continue to develop their skills, knowledge and understanding; and offers pathways to the next stage.

Curriculum areas

The CfE as a broad national framework and set out in the “Experiences and Outcomes” is structured into curriculum areas, of which there are eight: Expressive Arts, Languages and Literacy, Religious and Moral Education, Social Studies, Mathematics and Numeracy, Sciences, Technologies, and Health and Wellbeing. The eight curriculum areas are set out as linear development progressing through the different levels, including early learning. There are separate sections on the transversal areas “Health and wellbeing

across learning", "Literacy across learning", and "Numeracy across learning", in addition to the sections devoted to the eight separate curriculum areas.

Each curriculum area is introduced by a set of principles and guidelines. They address the range of attributes and capabilities, engagement, motivation and depth of learning that are expected to be developed in each of them. Within each, the Es and Os are further organised into "components" or sub-areas. To take the example of Table 1.4, the curriculum area "Technologies" is broken down into six components, each with its own Es and Os: technological developments in society; ICT to enhance learning; business; computing science; food and textiles; and craft, design, engineering and graphics. As illustrated in Table 1.4, the contents within each component are further broken down into Es and Os for the early level right through the different levels up to the end of Broad General Education.

Interdisciplinarity and connectedness in CfE

There is interdisciplinarity and connectedness within these eight curriculum areas as CfE places *literacy*, *numeracy* and *health and wellbeing* at the centre of all learning, in all curriculum areas. They thus appear both within the listed eight and are singled out for primacy as cross-cutting. The three inter-disciplinary curriculum areas - "Health and wellbeing across learning", "Literacy across learning", and "Numeracy across learning" - are regarded as the responsibility of all teachers and practitioners, not only those with specific teaching responsibilities aligned to these curriculum areas..

Beyond the interdisciplinarity inherent in the primacy given to these three learning areas, there is "*interdisciplinary learning*" of a more general kind. This is seen to be of essentially two kinds, often overlapping: i) learning planned to develop awareness and understanding of the connections and differences across subject areas and disciplines; and, ii) learning from different subjects and disciplines to explore a theme or an issue, meet a challenge, solve a problem or complete a final project. There is also a number of specified topics each with supporting material - "themes across learning" - such as sustainable development, global citizenship, enterprise in education, financial education and Scotland's culture.

Interdisciplinary learning is indeed regarded as a "learning context" of which there are three others: the ethos and life of the school as a community; curriculum areas and subjects; and opportunities for personal achievement. In addition to the other curricular dimensions, therefore, CfE formally recognises four different "*contexts for learning*" (*Building the Curriculum* 3). There is a strong emphasis on the acquisition of skills and the application of knowledge referring to the totality of experiences planned for children and young people. Scottish young people work increasingly towards recognised awards such as The Duke of Edinburgh Award, the Youth Achievement Award and the John Muir Award. There is thus recognition of young people's personal achievements within and beyond school, including through partnerships which support learning, e.g. with business, arts and community organisations. Since 2013, the Scottish Government requires every local authority to publish a three-year Community Learning Development (CLD) plan, which should include specification of how it helps to underpin CFE (Scottish Government, 2014b). Hence, a further aspect of the connectedness of CfE lies through drawing schooling, learning in the community, and out-of-school life in general more closely together.

Table 1.3 Es and Os in a “component” (sub-area) of a CfE curriculum area

Technological developments in society				
Early	First	Second	Third	Fourth
<p>I enjoy playing with and exploring technologies to discover what they can do and how they can help us. TCH 0-01a</p> <p>Within and beyond my place of learning, I can reduce, re-use and recycle resources I use, to help care for the environment. TCH 0-02a</p>	<p>By exploring and using technologies in the wider world, I can consider the ways in which they help. TCH 1-01a</p> <p>I can work with others to generate, discuss and develop imaginative ideas to create a product of the future. TCH 1-01b</p> <p>By exploring current news items of technological interest, I have raised questions on the issues and can share my thoughts. TCH 1-01c</p> <p>Throughout all my learning, I take appropriate action to ensure conservation of materials and resources, considering the impact of my actions on the environment. TCH 1-02a</p>	<p>When exploring technologies in the world around me, I can use what I learn to help to design or improve my ideas or products. TCH 2-01a</p> <p>I can investigate how an everyday product has changed over time to gain an awareness of the link between scientific and technological developments. TCH 2-01b</p> <p>Having analysed how lifestyle can impact on the environment and Earth's resources, I can make suggestions about how to live in a more sustainable way. TCH 2-02a</p> <p>I can investigate the use and development of renewable and sustainable energy to gain an awareness of their growing importance in Scotland or beyond. TCH 2-02b</p>	<p>From my studies of technologies in the world around me, I can begin to understand the relationship between key scientific principles and technological developments. TCH 3-01a</p> <p>From my studies of sustainable development, I can reflect on the implications and ethical issues arising from technological developments for individuals and societies. TCH 3-02a</p>	<p>I can compare traditional with contemporary production methods to assess their contribution in the world around me and explain the impact of related technological changes. TCH 4-01a</p> <p>Having investigated a current trend of technological advance in Scotland or beyond, I can debate the short- and long-term possibilities of the technological development becoming a reality. TCH 4-01b</p> <p>I can debate the possible future impact of new and emerging technologies on economic prosperity and the environment. TCH 4-01c</p> <p>I can examine a range of materials, processes or designs in my local community to consider and discuss their environmental, social and economic impact, discussing the possible lifetime cost to the environment in Scotland or beyond. TCH 4-02a</p>

Source: Education Scotland, *Curriculum for Excellence [the Experiences and Outcomes and Supporting Guidance for all Levels and Curriculum Areas]*, www.educationscotland.gov.uk/Images/all_experiences_outcomes_tcm4-539562.pdf.

More than this, there is the push towards further connectedness deriving from the importance accorded to the four capacities and their associated attributes and capabilities (Figure 1.6). These should run right through all the different curriculum elements, at all ages and phases. The curriculum principles (see below) are similarly meant to intertwine and cross-cut the teaching and learning areas and phases.

The combination of exemplified “Experiences and Outcomes” that may be drawn on in different ways, together with the expectation of promoting connection across fields and settings of learning, calls for demanding professionalism (see Chapter 4). The risk has been identified in curriculum design and teaching that the Es and Os will be treated as a manual and the separate items followed separately and slavishly.

As expressed in the Background Report (Scottish Government, 2015a):

However, in designing programmes of learning, teachers are encouraged to cluster these Experiences and Outcomes in ways that give rich and deep learning experiences rather than seeing each Experience and Outcome as an independent learning context. Staff can also extend the development of skills, attributes and capabilities and the development of understanding into more challenging and high levels of performance within and across levels.

New work is underway promoting the connectedness inherent in “significant aspects of learning” in the context of assessing progress and achievement in the BGE. Significant aspects of learning bring together a coherent body of knowledge, understanding and related skills, referring to the core learning against which learners’ progress can be compared periodically and support holistic judgements about progress and achievement of levels. Significant aspects of learning are intended to give a greater confidence that children and young people are making strong progress in learning through the Broad General Education phase. These are being devised by Education Scotland working with practitioners from across the 3-15 phases, drawing on exemplary work identified through quality assurance and moderation in schools and education authorities.

Curriculum principles

There are seven curriculum design principles: Challenge and enjoyment; Breadth; Progression; Depth; Personalisation and choice; Coherence; Relevance. As explained by Education Scotland on its website:

The principles must be taken into account for all children and young people. They apply to the curriculum both at an organisational level and in the classroom and in any setting where children and young people are learners. The principles will assist teachers and schools in their practice and as a basis for continuing review, evaluation and improvement. They apply to the curriculum at national, education authority, school and individual levels and must be taken into account for all children and young people.

These are clearly highly ambitious, and invite questions concerning how they should be interpreted and measured, especially as they span over all layers and settings of education, in school and out. They do not yet exhaust the dimensions through which the Curriculum for Excellence is described, though these additional dimensions - the “entitlements” that every learner should receive³; the “aims” in accordance with the principles⁴ - are just noted here rather than elaborated.

To sum up there are:

- Four capacities, covering 12 attributes and 24 capabilities across the four - 40 in all.
- Five levels, from early to senior, of which four are covered by Broad General Education.
- Seven principles, six entitlements and ten aims.
- Eight curriculum areas and three inter-disciplinary areas.
- 1 820 Experiences and Outcomes statements (1 488 in the 8 curriculum areas and 332 in the 3 inter-disciplinary areas).
- Four contexts for learning.

- “Significant aspects” of learning.

The complexity of the layers and dimensions, when all are put together, raises its own questions about how comprehensible is the Curriculum for Excellence, especially among those who are not necessarily full-time educational professionals and yet who need to enjoy a deeper grasp of CfE than the headlines of the four capacities. These include young people themselves.

Key summary points

- Scotland’s overall population is higher than at any time in its history, with immigration now the primary driving force behind population growth. It is a comparatively urbanised country among those that make up the OECD, with somewhat higher proportions living in cities and significantly higher proportions in other smaller towns.
- The structure of Scotland’s economy is similar to most advanced economies, with services accounting for the bulk of output and employment. The general decline in manufacturing has been less pronounced in Scotland than in many others as it still accounts for a fifth of output. There are marked regional differences in the structure of the Scottish economy. At the time of writing, Scotland is enjoying a relatively positive economic outlook.
- Scotland is similar to OECD averages or compares favourably on a range of social indicators. Housing is less crowded than across the OECD area as a whole; it is a relatively safe country; it is somewhat above the average for Internet broadband access; voting levels stand very near to the OECD average (not counting the 2014 referendum which galvanised such high interest levels); the Scottish population is relatively well educated; and Scotland is very close to the international average on income inequality, and measured poverty levels are somewhat lower than across the OECD.
- Life expectancy and mortality rates remain real problem areas for Scotland: they are worse than the OECD averages and indeed are lower than in many European and OECD countries.
- A significant amount of legislative power has been devolved to the Scottish Parliament in Edinburgh including education, albeit that Scotland has a long tradition of organising its own education system. Already in the 15th century it had three universities and its educational history since then has departed markedly from developments south of the border.
- It is a fundamental principle of the public education system in Scotland that education is free at the point of delivery to the pupil and their families. The principle of provision of free (though not compulsory) education has been extended to children aged 3-4. Early Learning and Childcare (ages 3-4), Primary Education (ages 5-12) and Secondary Education (ages 12-18, compulsory up to 16) are all the responsibility of Local Authorities.
- The Scottish Government develops national policy and sets the overall direction of education policy. Education Scotland is an especially influential body, with wide-ranging responsibilities in relation to the Curriculum for Excellence; it was established as recently as 2011 through combining the inspection service with the

improvement, curriculum, and professional development function (formerly Learning and Teaching Scotland).

- Curriculum for Excellence represents an ambitious departure seeking to develop a coherent 3-18 curriculum around capacities and learning, rather than school subjects, with a different approach to assessment from that in place before. It is complex as it is organised around four capacities (covering 12 attributes and 24 capabilities across the four); five levels, from early to senior; seven principles, six entitlements, ten aims, and four contexts for learning; eight curriculum areas and three inter-disciplinary areas; and several hundreds of Experiences and Outcomes.
- Broad General Education (BGE), the main subject of this review, is part of the overall 3-18 CfE curriculum. It does not coincide exactly with the duration of compulsory schooling until the young person turns 16 years, as BGE includes early learning before the primary years and ends in S3 (whereas compulsory schooling normally includes S4).

Notes

- 1 The turnout at the 2014 Referendum was very high at 84.6%. Young people aged 16-34 years old were the least likely of any of the eligible age groups to have voted although still high at 69%, (Electoral Commission, 2014).
- 2 These include the EU15 countries, Australia, Canada, Norway and the United States. Scotland was also below the other three constituent countries of the United Kingdom.
- 3 These are: i) a coherent curriculum; ii) a Broad General Education; iii) a Senior Phase where he or she can continue to develop the four capacities and also obtain qualifications; iv) being able to develop skills for learning, skills for life and skills for work, with a continuous focus on literacy and numeracy and health and wellbeing; v) to receive personal support to enable them to gain as much as possible from the opportunities which CfE can provide and receive support in moving into a positive and sustained destination.
- 4 The aims are to: focus on making learning more engaging and relevant to the real world; offer learning which provides both depth and breadth; increase personalisation and learners' choice within the framework; raise standards for all; enable young people to improve their confidence, skills, achievement and attainment; provide more flexibility, giving teachers greater professional freedom; offer a simple and effective structure of qualifications and assessment; provide skills for work options, with appropriate recognition for vocational learning and broader achievement; develop literacy and numeracy, and other essential skills for life and work; provide for subject teaching alongside cross-subject and inter-disciplinary activity.

References

- Education Scotland (undated), *Curriculum for Excellence [the Experiences and Outcomes and Supporting Guidance for all Levels and Curriculum Areas]*, www.educationscotland.gov.uk/Images/all_experiences_outcomes_tcm4-539562.pdf
- Education Scotland (undated), “Professional learning resource: Assessing progress and achievement overarching paper”, www.educationscotland.gov.uk/learningandteaching/assessment/progressandachievement/
- Education Scotland (2008), Curriculum for Excellence, *Building the curriculum 3: A Framework for Learning and Teaching*,
- The Electoral Commission (2014), Scottish Independence Referendum Report on the referendum held on 18 September 2014, Electoral Commission, ELC/2014/02.
- Ipsos Mori (2014), “Youth social action in the UK, 2014. A face-to-face survey of 10-20 year-olds in the UK”, A report on behalf of the Cabinet Office, <https://www.ipsos-mori.com/Assets/Docs/Publications/sri-ecf-youth-social-action-in-the-uk-2014.pdf>
- National Records of Scotland (2014a), Population Density in Scotland by Council Area, 2014, www.nrscotland.gov.uk/files/statistics/population-estimates/midyear-2014/14mid-year-pe-cahb-fig11b.pdf
- National Records of Scotland (2014b), Vital Events Statistics: birth rates, www.gro-scotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/vital-events-reference-tables/2014/section-3-births
- Newton, J.N. et al. (2015), “Changes in health in England, with analysis by English regions and areas of deprivation, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013”, *Lancet Journal*, published online September 15, 2015, [http://dx.doi.org/10.1016/S0140-6736\(15\)00195-6](http://dx.doi.org/10.1016/S0140-6736(15)00195-6)
- OECD (2015a), OECD Family Database, OECD, Paris, www.oecd.org/social/family/database.htm
- OECD (2015b), *In It Together: Why Less Inequality Benefits All*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264235120-en>
- OECD (2006), *Demand-Sensitive Schooling?: Evidence and Issues*, Schooling for Tomorrow, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264028418-en>
- Office for National Statistics (2015), Labour Market Statistics Summary Data Tables, Regional Labour Market Summary, Labour Force Survey, www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-375224 (accessed September 2015).
- Office for National Statistics (2015), UK Labour Market, June 2015.
- Office for National Statistics, (2014), “Population and Health Reference Tables, Annual data: Live Births (numbers, rates and standardised mean age of mother), United Kingdom and constituent countries”, Vital Statistics, www.ons.gov.uk/ons/about-ons/get-involved/consultations-and-user-surveys/consultations/statistical-products-2013/index.html

- Office for National Statistics (2011), Regional Labour Market Summary: Labour Force Survey (September), www.ons.gov.uk/ons/rel/lms/labour-market-statistics/june-2015/statistical-bulletin.html, www.ons.gov.uk/ons/rel/subnational-labour/regional-labour-market-statistics/september-2011/stb-regional-labour-market-september-2011.html#tab-Unemployment
- Priestley, M. (2010), "Curriculum for Excellence: transformational change or business as usual?" *Scottish Educational Review*, Vol. 42/1, pp 23-36.
- Scottish Education Department (1977), *The Structure of the Curriculum in The Third and Fourth Years of the Scottish Secondary School*, HMSO, Edinburgh (Munn report).
- Scottish Education Department (1977), *Assessment for All: Report of the Committee to Review Assessment in the Third and Fourth Years of Secondary Education in Scotland*, HMSO, Edinburgh (Dunning report)
- Scottish Government, The Awards Network www.awardsnetwork.org/award.php?organisation=mv
- Scottish Government (2015a), *OECD-Scotland Education Policy Review: Country Background Report*, Scottish Government.
- Scottish Government (2015b), *Poverty and Income Inequality in Scotland: 2013/14*, Edinburgh.
- Scottish Government (2015c), *Severe Poverty in Scotland*, Edinburgh.
- Scottish Government (2015d), *Scotland's People Annual Report: Results from 2013 Scottish Household Survey: Revised October 2015*, Scottish Government www.gov.scot/Publications/2014/08/7973
- Scottish Government (2015e), *Report on Government Expenditure and Revenue Scotland 2013-14*, Scottish Government.
- Scottish Government, (2014a), *Summary Statistics for Schools*, Scottish Government www.gov.scot/Topics/Statistics/Browse/School-Education/Summarystatsforschools (accessed from 2002 to 2014).
- Scottish Government, (2014b), *The Requirements for Community Learning and Development (Scotland) Regulations 2013: Guidance for Local Authorities*, Scottish Government.
- Scottish Government (2012), *Scottish Social Attitudes Survey 2011: Core Module - Attitudes to Government, the Economy and Public Services in Scotland*, Scottish Government, www.gov.scot/Publications/2012/06/9925.
- Scottish Government (2010), *Demographic Change in Scotland*, Scottish Government. www.gov.scot/Publications/2010/11/24111237/0.
- Scottish Government (2008), *Building the Curriculum 3, a Framework for Learning and Teaching*, www.educationscotland.gov.uk/Images/building_the_curriculum_3_jms3_tcm4-489454.pdf.
- Scottish Government (2007), *OECD Review of the Quality and Equity of Education Outcomes in Scotland: Diagnostic Report*, Scottish Government.

Chapter Two

Quality and equity in Scottish schools

This chapter examines evidence on quality and equity in Scottish education over the past decade or so. It starts by reviewing international evidence and compares Scotland with certain other systems — especially, with Canada, Ireland, the Netherlands, New Zealand and Norway. Naturally, this chapter depends on available sources, notably OECD’s Programme of International Student Assessment (PISA) but also the Health and Behaviour in School-aged Children (HBSC) survey on health and well-being. The international picture is then complemented with Scottish evidence on dimensions of quality and equity relevant to Broad General Education. The chapter also summarises the numerous policies, frameworks and interventions that have been put in place in order to improve education outcomes and to close the diverse equity gaps in achievement and attainment. It includes a summary of key points and concludes with specific recommendations.

This chapter seeks to present an up-to-date picture on quality and equity in Scotland and relevant trends using international and national sources. It starts by reviewing international evidence and compares Scotland with certain other countries. Naturally, this chapter depends on available sources, notably OECD's Programme of International Student Assessment (PISA) but also the Health and Behaviour in School-aged Children (HBSC) survey on health and well-being. The international picture is then complemented with Scottish evidence on dimensions of quality and equity relevant to Broad General Education. The chapter also summarises the numerous policies, frameworks and interventions that have been put in place in order to improve education outcomes and to close the diverse equity gaps in achievement and attainment. It includes a summary of key points and concludes with specific recommendations.

We should emphasise that this summary is not an evaluation of Curriculum for Excellence (CfE), and indeed the evidence is not available for such an evaluation (our recommendations in Chapter 5 about evidence and current government proposals to expand all-Scotland evidence refer to this lack). Our review of quality and equity data as much describes the context and challenges for CfE as it serves as a reflection on it. This chapter cannot be read as an evaluation of CfE because: first, the findings are a reflection of all arrangements and policies in Scotland extending well beyond CfE; second, many of these data pre-date CfE implementation or are taken from when it was in the early phases of implementation; third, an evaluation would ideally be based on a comprehensive set of measures adequately covering the full aims of the Curriculum for Excellence as a whole together with appropriate comparison measures. So, the issue is not only that some of the available figures are dated but rather that there is no evidential base with which to evaluate CfE in a way that would do it justice.

These caveats notwithstanding, gaining a more empirically-grounded picture of quality and equity in Scottish schooling is an invaluable backdrop for any review of CfE as it bases our discussion of decision-making; schooling and leadership; and evaluation and assessment on concrete achievements and challenges.

Quality and equity in Scotland - international evidence

In the first part of the chapter, we put Scotland into its international context on diverse measures relating to both quality and equity. These refer especially to assessments of mathematics, reading and science, not just regarding levels of achievement but also their distributions and associated social variables. Then the indicators broaden to include evidence about health, wellbeing and engagement. Both equity and quality are to the fore. In the international section, PISA data figure prominently. The most recent year available from these triennial surveys is 2012 which was only two years after CfE began to be implemented in schools. Not only this but they cannot be taken as a proxy for the full spectrum of knowledge, skills and competences that is relevant to CfE.

PISA analysis is very useful nevertheless so long as it is interpreted with these caveats in mind. They permit comparisons with other countries and with international averages. They permit the delineation of trends, which for Scotland go back to 2003. And, they are about much more than measured levels of achievement. The impressive comparative results showing that the profile of Scottish pupils in a typical school is less likely to be a reflection of social background – of rich congregating with rich and poor with poor - would not be possible without the PISA data. Such findings reflect deep-seated aspects of society and culture as much as (perhaps more than) deliberate policy and so do not change rapidly from one survey to the next. Even so, the 2015 survey

results will be very informative when they are published in 2016 as by then there will have been several years of experience with the *Curriculum for Excellence*.

Patterns and trends related to quality

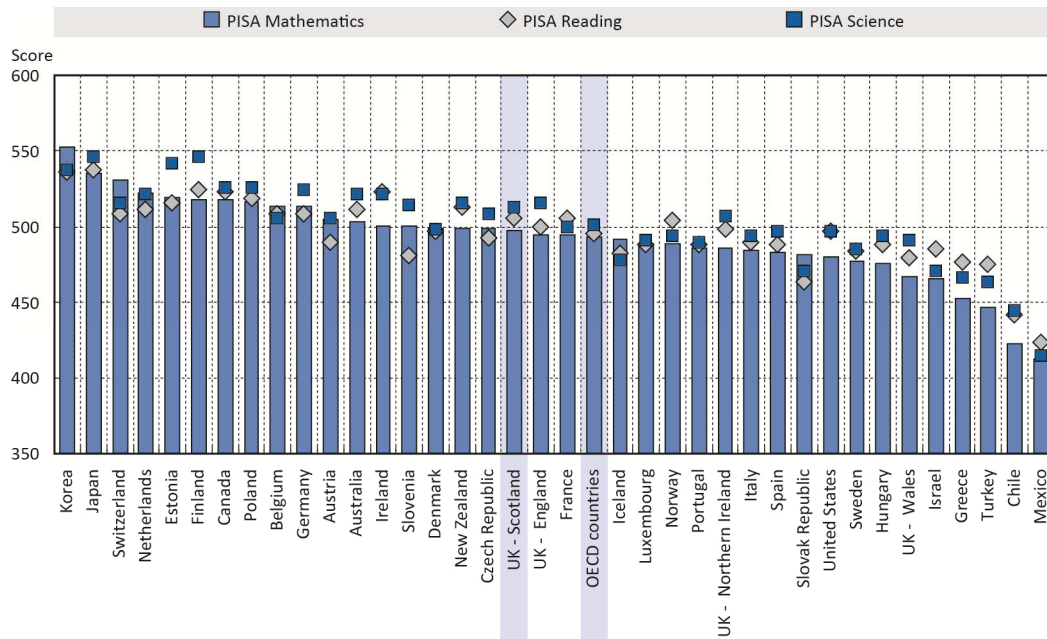
A snapshot of Scotland's performance in the most recent PISA survey shows Scottish 15-year-olds to be above the OECD average in reading and science while similar to the average in mathematics (Figure 2.1).¹ Scotland's mean performance in PISA 2012 was 513 points in science compared with the OECD average of 501; Scotland scored 506 in reading which was again above the OECD mean level of 496. In mathematics, however, Scotland's 15-year-olds were only slightly above and very close to the OECD average in 2012 (498 compared with 494).

What about achievement levels in certain other countries with which Scotland might compare itself like Canada, Ireland, the Netherlands, New Zealand, or Norway? These are systems that share at least one of the following characteristics with Scotland: the English language, a relatively small population, an inclusive system, and high ambition educationally. While Scotland tends to be similar to Norway or above it on these basic indicators, it is largely below these particular other countries.

- Scotland scored 506 in PISA in reading in 2012, which is above the OECD average (496) and similar to Norway (504), the Netherlands (511) and New Zealand (512). However, it is below Canada (523) and Ireland (523).
- Scottish young people scored 513 in science, which is above the OECD average (501). It was similar to New Zealand (516) and significantly above the Netherlands (522) and Norway (495). But it was still significantly below Canada (525) and Ireland (522).
- Scotland's young people achieved on average 498 PISA points in mathematics in 2012, which is similar to the OECD average (494) and to New Zealand (500) as well as Ireland (501). It is above Norway (489). Again, it is below the levels achieved in Canada (518) and the Netherlands (523).

It might be expected that Scottish young people do not score at similar levels to the Asian school systems in Korea and Japan (Figure 2.1). But it is also well down on Finland and Estonia on all three literacies. Scotland's achievement levels are well behind high-ranking Switzerland in mathematics, but otherwise its achievement in reading and science is at similar level.

How has this situation changed over recent years? The picture varies depending on the literacy area in question (Figure 2.2). Performance in the PISA surveys going back to 2003 shows that the now-average levels in Scotland in mathematics was not always thus, and it was up among the leading countries just after the turn of the millennium. The major drop took place from the high 524 in maths in Scotland in 2003 to only 506 three years later. Performance has been steady since then. Clearly, the timing of this decline cannot be attributed to the Curriculum for Excellence as it predates CfE by many years.

Figure 2.1 Achievement in mathematics, reading and science in OECD countries, PISA 2012

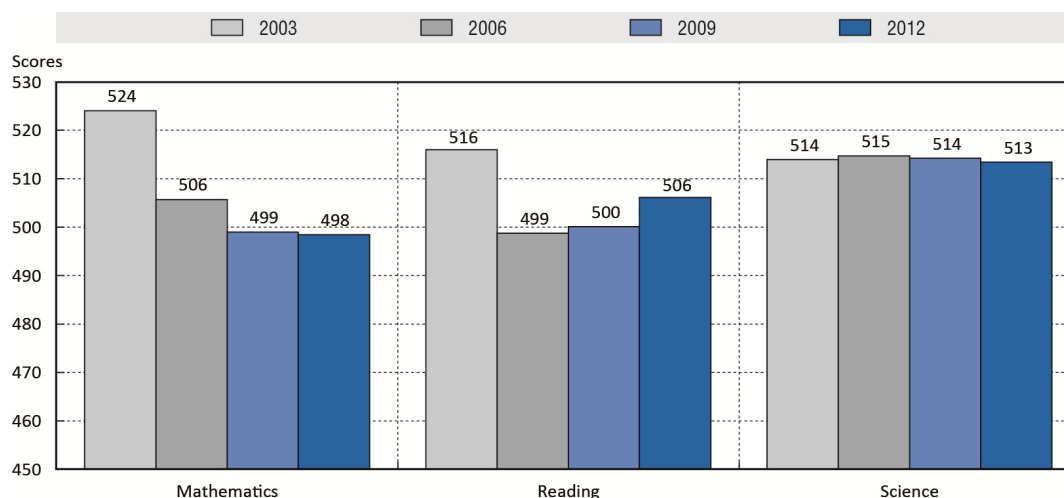
Note: Data is sorted in ascending order of mathematics.

Source: OECD (2014), *PISA 2012 results: What students Know and Can Do- Student performance in Mathematics, Reading and Science* (Volume I, Revised edition, February 2014), PISA, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264208780-en>.

Scotland's performance in reading also dropped sharply between 2003 and 2006 and has been relatively stable since. The reading score in 2012 was 10 points down on its earlier 2003 level. Small variations in the recent surveys have not been statistically significant. By contrast, science achievement in Scotland, based on PISA data, has remained stable since 2006. Hence, there was not an across-the-board drop.

Do other international assessments of Scottish achievement levels confirm the picture drawn using the PISA surveys? It is possible to look at the key period after 2003 identified as critical above to see how younger children performed in mathematics and science, and in reading using the Trends in International Mathematics and Science Study (TIMSS) and the Programme in International Reading and Literacy Study (PIRLS). But it is not possible to explore trends beyond 2007 because this was the last year when Scotland participated in TIMSS and PIRLS.

These data confirm the PISA findings in some respects but not in others. Using TIMSS, the level of mathematics attainment of Scottish students enrolled in S2 (around age 14) followed a similar trend to PISA and declined by 11 score points. This is a small but statistically significant decline. The clear drop in the mid-2000s cannot therefore be attributed to specific sampling or measurement issues specific to the PISA surveys at this time as they are reproduced for 14-year-olds in TIMSS. In science, TIMSS data showed a small drop in achievement between 2003 and 2007 among Scottish 14-year-olds (16 points). This similarly suggests that there was real change taking place at this time.

Figure 2.2 Trends in Scotland's achievements in PISA by subject area since 2003

Source: OECD (2014), *PISA 2012 Results: What students Know and Can Do- Student performance in Mathematics, Reading and Science* (Volume I, Revised edition, February 2014), <http://dx.doi.org/10.1787/9789264208780-en>; OECD (2010a), *PISA 2009 Results: What Students Know and Can Do* (Volume I): *Student Performance in Reading, Mathematics and Science*, <http://dx.doi.org/10.1787/9789264091450-en>; OECD (2007), *PISA 2006: Science Competencies for Tomorrow's World: Volume I: Analysis*, <http://dx.doi.org/10.1787/9789264040014-en>; OECD (2004), *Learning for Tomorrow's World: First Results from PISA 2003*, <http://dx.doi.org/10.1787/9789264006416-en>.

Where the decline in achievement in mathematics in Scotland after 2003 is not mirrored in the international assessments undertaken at that time are parallel assessments of primary children of around 10 years of age. Whether for mathematics, science or reading, achievement levels showed no discernible change between 2003 and 2007. However, while PISA and TIMSS scored Scotland above average, even well above average, for secondary-level students in mathematics in 2003, the achievement of the primary-age pupils was already only average in 2003. It may be that whatever was happening with regard to secondary-level students in the mid-2000s was not matched for those in primary schools; it may also be that changes in mathematics achievement had taken place for the primary-age pupils even earlier and this showed up on the mid-2000s in secondary achievements. As Scotland has discontinued its participation in TIMSS and PIRLS, such age/level comparisons are no longer possible.

The spread of achievement and how students perform at the top and bottom of the distribution give a more finely-grained picture of Scotland's performance. PISA data show that achievement levels of 15-year-old Scots are relatively equal in terms of their spread. The variation in mathematics scores in Scotland in 2012, as shown by the standard deviation (s.d.) and the difference between the top and bottom 10% of students, was narrower than the OECD average and indeed of that of most OECD countries. In Scotland, the s.d. was 86 and the performance gap between the very top and bottom was 222 points. This compares with the OECD average of, respectively, 92 and 239. Only 4 countries had narrower distributions. In the other systems being highlighted in this chapter, both the dispersion and the gaps between top and bottom performance were similar [Canada (89 s.d. and 231 scores), Ireland (85, 219), the Netherlands (92, 242), and Norway (90, 231)]; or higher [New Zealand (100, 261)]. What is more, since 2003, Scotland has been among the OECD countries with the most equal scores in the sense of

the relatively narrow distribution of mathematics achievements; the spread was very similar in 2003 as it was in 2012.

Another measure of (in)equality of achievement is the relative size of the low achievers within the total group of students being tested. On this measure too Scotland's students are relatively equal. The proportion which scores below Level 2 (often taken as a basic threshold of being able to participate effectively in society) was lower than the OECD averages in 2012. In reading, 13% were below Level 2 achievement compared with the OECD average of 18%. In mathematics, Scotland's 18% is statistically similar to the OECD average of 23% and in science Scotland's 12% is also statistically similar to 18% across the OECD. In short, Scotland's education system produces fewer low performers in reading. As regards high achievement, the share of Scottish students who attain Levels 5 or 6 was similar to the OECD average. Trends since 2003 in Scotland nevertheless show that the proportions of low achievers in mathematics increased while contrariwise the proportions of high-achievers declined.

Health, wellbeing and engagement among Scotland's young people

The *Curriculum for Excellence* goes well beyond prioritising the development of numeracy and literacy skills: health and wellbeing are singled out in addition at all levels. They figure prominently as one of the eight curriculum areas and together with literacy and numeracy should be integral to all curriculum areas (see Chapter 1). Schools are thus importantly charged with enhancing the physical, mental and emotional health of young people in Scotland. The HBSC international survey² gathers information on a wide set of outcomes related to health and wellbeing, providing a complementary picture of Scotland's young people in fields of high policy priority.

Over a quarter of young people (26%) in Scotland reported their health as “excellent” in 2014 (Currie et al, 2015). While self-rated health levels changed little between 2002 and 2010 (around 21% rated their health as excellent), now many more young Scots assess that they are in excellent health. Risky health behaviours such as smoking, use of alcohol and cannabis have shown major improvements since the turn of the millennium. For example, nearly a quarter of Scottish 15-year-olds (24%) reported themselves to be smokers in 2002, but this had dropped to 14% in 2014. Even more striking perhaps, the proportion of 15-year-olds who reported drinking alcohol on a weekly basis dropped from 43% in 2002 to 14% in 2014. Likewise, drunkenness and use of cannabis at least once in their lives has shown a downward trend since 2002.

In terms of mental well-being, young people in Scotland report high life satisfaction. Most Scottish adolescents (87%) said that they were highly satisfied with their lives (Currie et al, 2015), although in this case levels have remained largely static since 2002 and 2014. Similarly, no changes were observed on the indicators of happiness - how happy young people feel with their lives and how often they feel happy. Approximately 4 in 10 young Scots say that they feel “very happy” with their lives.

Engagement with school and learning

A balanced set of personal qualities such as motivation, perseverance and self-belief enables individuals to manage their own emotions, interact appropriately, and make decisions and choices for a healthy and productive life (OECD, 2015). CfE aims at improving achievement in part through the enhancement of students' engagement with school and learning. The review team was impressed with the range of hands-on and out-of-school activities children are exposed to in order to enhance their learning and

engagement with school. These included interdisciplinary activities within schools and partnerships between schools, employers, the community and other national and local organisations.

On this, PISA asks students for their views on their engagement with school, drive, self-beliefs and motivation – all of which shape their achievements in and out of school. Compared with the clear progress apparent in health, the indicators of engagement with school such as punctuality and regular attendance in Scotland are less positive. In 2012, 12% of Scottish students reported arriving late to school three or more times without authorisation in the two weeks prior to the survey, and in the same time period nearly a quarter (23%) reported skipping a day or more of school. Lack of punctuality was similar to the OECD average (10%), yet unauthorised absenteeism was significantly above (OECD average of 18%). Again, it is too early to note in 2012 an impact of *Curriculum for Excellence* on engagement towards the end of Broad General Education but it might be expected to improve in the 2015 PISA results.

Drive, self-belief and motivation

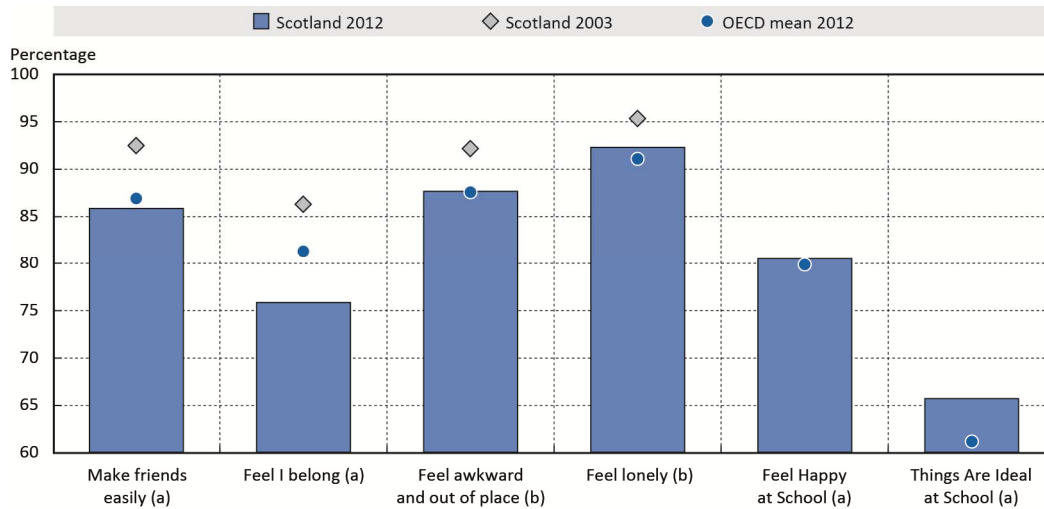
The review team during its visits to schools found students to be confident, articulate, enthusiastic and proud of their schools and of their identity. Students participating in PISA are asked for their views on different aspects of drive, self-belief and motivation. For example, to measure “sense of belonging” students are asked whether they: feel like an outsider or left out of things; make friends easily; feel like they belong; feel awkward and out of place; feel other students seem to like them; and feel lonely.

Scottish students’ sense of engagement, drive and self-belief were similar to the OECD averages in 2012. In 2012, 76 % of 15-year-old Scots felt that they belonged in school (OECD 81%), 86% agreed or strongly agreed that they could make friends easily (OECD 87%), 88% disagreed that they felt awkward and out of place (OECD 88%) and 95% disagreed that they felt lonely (OECD 91%). The large majority of Scottish students therefore feel connected to their school environment as do young people across the OECD (Figure 2.3). HSBC data show the share of adolescents reporting feeling left out of things was higher in 2014 than in 2010, but this reflects a wide range of social influences and not only school (Currie et al., 2015).

At the same time, PISA 2012 asked students to evaluate their happiness at school and to reflect on whether their school environment approaches their notion of an ideal situation. Around 8 in 10 Scottish students felt happy at school – the same as across the OECD – and 66% believed that conditions were ideal in their school, which is significantly above the OECD figure of 61% (Figure 2.3). The HBSC survey confirms the familiar international finding that enjoyment of school decreases with age, with 15-year-olds reporting the lowest levels of enjoyment. In 2014, 37% of 11-year-olds (P7) reported that they liked school a lot compared with only 12% of 15-year olds (S4). Scottish adolescents are less likely to report liking school than students in comparator countries, and there has been little change in enjoyment of school in Scotland since 20023 (Currie et al., 2015). Again, it is to be hoped that CfE will have made a substantial dent on this indicator in the 2015 PISA survey.

Figure 2.3 Sense of belonging of Scottish students on diverse measures: 2003 and 2012

(% of students who (a) “agree” or “strongly agree” or (b) “disagree” or “strongly disagree”)



Note: “Feeling happy at school” and “things are ideal at school” were only asked in the 2012 survey.

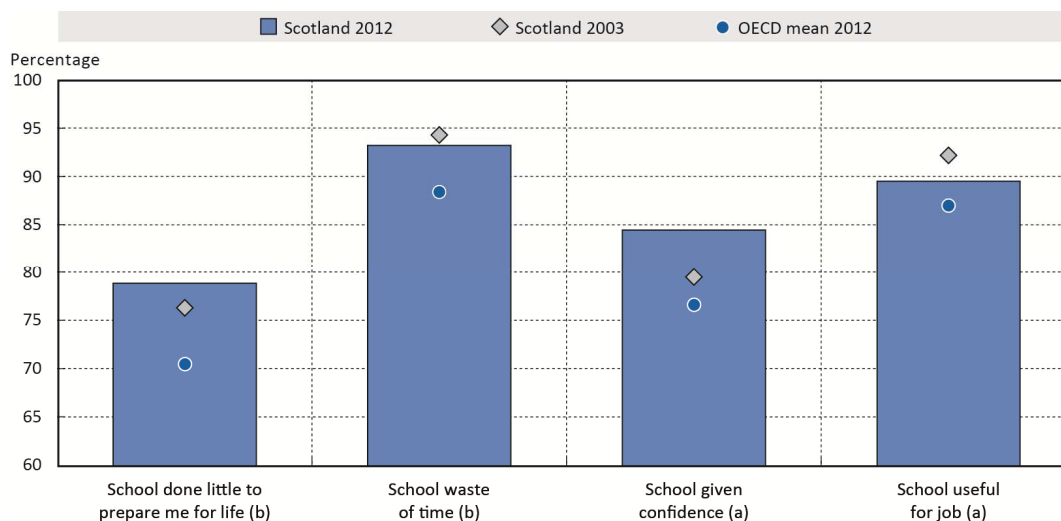
Source: OECD (2013b), *PISA 2012 Results: Ready to Learn (Volume III): Students' Engagement, Drive and Self-Belief*, <http://dx.doi.org/10.1787/9789264201170-en>; OECD (2004), *Learning for Tomorrow's World: First Results from PISA 2003*, <http://dx.doi.org/10.1787/9789264006416-en>

Scottish students hold relatively positive attitudes towards schools and what it has given them compared with their peers across OECD countries and more than students in Canada, Ireland, the Netherlands, New Zealand and Norway. Around 8 out of 10 students said they did not agree that school had done little to prepare them for life which is well above the OECD average of 71%, and more than 9 in 10 did not agree that school had been a waste of time (OECD 88%) (Figure 2.4). Most Scottish secondary students believe that school has helped to give them confidence and has taught them things useful in a job (85% and 90%, compared with OECD levels of 80% and 87%). Such relatively positive attitudes towards school have been a feature of Scotland since 2003 and indeed since that year the proportion of students reporting that school gives them confidence has increased significantly (from 80% to 85%).

Positive teacher-student relations are valued in the *Curriculum for Excellence* as contributing to the ethos and life of the school as a community and all staff are encouraged to develop supportive relationships with children and young people. At least three in four Scottish students surveyed through PISA answered positively to questions related with teacher-student relations, including whether they get along with their teachers, whether teachers take the students seriously, and whether teachers are a source of support if the student needs extra help. More held positive perceptions of teacher-student relationships were observed in 2012 than in 2003 (positive changes were statistically significant for most items: get along with teachers; teachers are interested; and teachers help students). Almost all the secondary school inspections in 2014-15 reported positive staff/pupil relations. These are other positive findings about students and perceptions. At the same time, the HBSC survey reported that perceived teacher support is substantially lower among secondary school students compared with primary school pupils (Currie et al., 2015).

Figure 2.4 Attitudes towards school among Scottish teenagers: 2003 and 2012

(% of students who (a) “agree” or “strongly agree” or (b) “disagree” or “strongly disagree”)



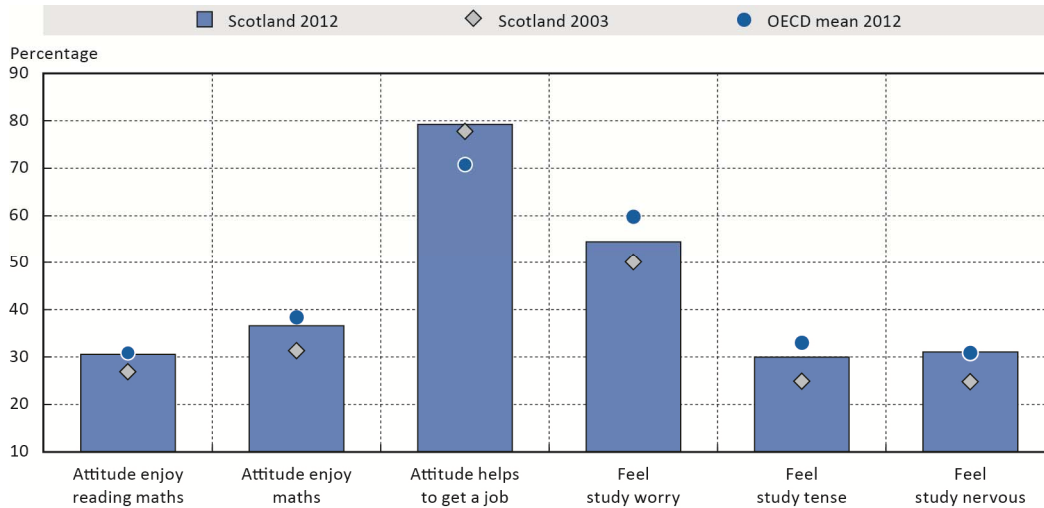
Source: OECD (2013b), *PISA 2012 Results: Ready to Learn (Volume III) : Students' Engagement, Drive and Self-Beliefs*, <http://dx.doi.org/10.1787/9789264201170-en>; OECD (2004), *Learning for Tomorrow's World: First Results from PISA 2003*, <http://dx.doi.org/10.1787/9789264006416-en>

Motivation is an integral part of these different attitudes and a key driver of learning. PISA collects measures of student motivation towards mathematics and just over a third of Scottish students (37%) reported in 2012 that they do mathematics because they enjoy it. Those saying that they regard mathematics as interesting and enjoyable have increased moderately from the levels observed in 2003, suggesting that it may be being taught in a more interesting way even if corresponding mathematics performance has fallen over this period. It is important to address motivation and not only achievement levels as the first leads to the second: on average across OECD countries, greater levels of mathematics anxiety are associated with a 34-point achievement drop – the equivalent of almost one year of schooling (OECD, 2013b).

Some 30% of Scottish students reported that they feel very tense and nervous when doing mathematics work and more than 50% worry that mathematics will be difficult (Figure 2.5). The anxiety levels reported by Scottish 15-year-olds are similar to the OECD average and similar to those of Canadian, Irish and New Zealand students, but higher than the levels reported in the Netherlands and Norway. HBSC data also suggest that a considerable proportion of students feel pressure from schoolwork, and this is much more likely among the older 15-year-old students (70% in Scotland) compared with 33% of 13-year-olds and 21% of 11-year-olds (Currie et al, 2015). Moreover, the levels of stress are higher than in the past. Both international surveys register a statistically significant upward trend since the beginning of the millennium in the proportion of students feeling pressured by schoolwork and feeling tense or nervous when doing mathematics. Unless the 2015 PISA results show a clear change in levels of “maths anxiety” this is an area that warrants close attention in the future, not only regarding students but also their teachers and at all levels.

Figure 2.5 Motivation and anxiety towards mathematics: 2003 and 2012

Percentage of students who reported “agree” or “strongly agree” (a) or who reported “disagree” or “strongly disagree” (b)



Source: OECD (2013), *PISA 2012 Results: Ready to Learn (Volume III) : Students' Engagement, Drive and Self-Beliefs*, <http://dx.doi.org/10.1787/9789264201170-en>; OECD (2004), *Learning for Tomorrow's World: First Results from PISA 2003*, <http://dx.doi.org/10.1787/9789264006416-en>.

The international evidence on equity

A positive aspect of schooling in Scotland is that relatively little of the difference in student achievement is attributable to how schools differ. In 2012, 86% of achievement differences in mathematics are found within schools and only 14% is accounted for by which school the student attended. Likewise, in Canada, Ireland, Norway and New Zealand within-school variation accounted for the majority of differences in achievement (more than 75 %), while the Netherlands presents a different pattern. But across OECD countries as a whole, within-school variation was significantly lower at around 63% of the total differences, with as much as 37% attributable to between-school differences (which school the student attends). As in other countries, the achievement of students in Scotland is associated with socio-economic background, immigrant status, gender and location. In fact, these differences are around similar magnitudes to those observed for the OECD as a whole. A major international finding of the PISA studies is that high performance does not need to be sacrificed to achieve greater equity in education outcomes and equity does not have to be diminished in pursuit of high performance (OECD, 2013a).

Performance differs by students' socio-economic background

PISA data permit the calculation of an index of social inclusion, which is the degree to which students of different socio-economic status attend the same school (or the degree to which different schools have different socio-economic profiles). This index suggests that Scottish schools are highly inclusive. The index for Scotland was well above the OECD average (86% compared with 75%) and brings Scotland into the group of countries with high levels of inclusion at over 85% (Finland, Norway and Sweden). Therefore, the school that Scottish students attend is less a reflection of social background and has less of an impact in their achievement than other factors in their own background.

PISA data show that Scotland has a relatively equitable system. This section reports analysis in terms of mathematics and equity because this received detailed attention in 2102 but the results are similar for reading and science. The degree to which socio-economic status predicts performance irrespective of which school was attended stands very close to the OECD average; in this respect it is neither especially equitable nor inequitable compared with the international average. In 2012, students' socio-economic background explained 13 % of the variation in mathematics test scores (OECD average of 15%). This association is very similar to that in Ireland; it is also a smaller association than in New Zealand. Socio-economic background is more determinant in Scotland, however, than in Canada, the Netherlands and Norway.

The spread of achievement by socio-economic background in Scotland is also narrower than in the OECD as a whole. While socio-economically advantaged Scottish students (in the top quarter of socio-economic status distribution) scored an average of 83 points higher than their disadvantaged peers (bottom quarter), the difference was of 90 points in the average OECD country. Compared with comparator countries only Canada (72 score points) and Norway (63 score points) had narrower gaps.

Although socio-economically advantaged students outperform their disadvantaged peers in general terms, many disadvantaged students succeed at school and achieve high levels in the PISA assessments. These are the ones the OECD has dubbed “resilient” students - those who succeed in school despite a disadvantaged socio-economic background.⁴ The more self-confident and motivated students are, the higher the chances of being resilient (OECD, 2013a). In Scotland, 8% of all students and a third of the disadvantaged students (32%) were identified as “resilient” in 2012. This share was similar to the levels observed in Canada and the Netherlands and higher than the averages across OECD countries (Figure 2.6). *Curriculum for Excellence* is intended to foster many of the factors associated with resilience: students' self-confidence in themselves and their own academic abilities; motivation; being engaged; and receiving support from their teachers. We would therefore hope to see improvements in Scotland on this indicator in the forthcoming waves of PISA, when CfE has had more time to embed, such that students will have been to school with CfE throughout their early learning and throughout their schooling.

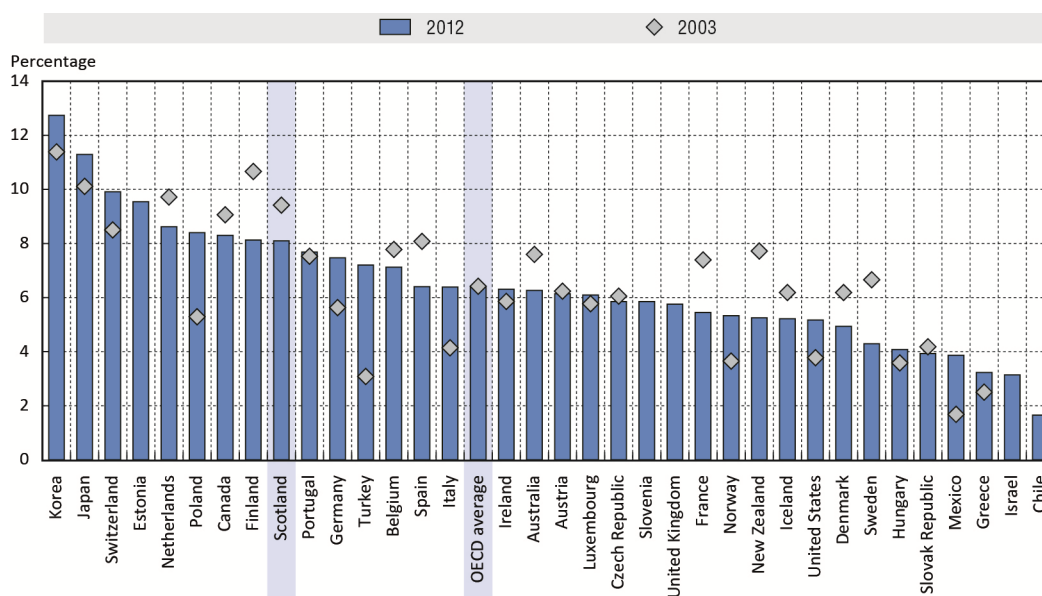
Immigrant students perform better than their native peers

Since the early 2000s, Scotland has experienced increases in net migration, which is a primary force driving population increase (Chapter 1). In general, across the OECD students with immigrant backgrounds tend to be more disadvantaged and to underperform in education compared with non-immigrant students, even in similar socio-economic circumstances. In 2012, across OECD countries immigrant students scored 34 points lower in mathematics than non-immigrant students and 21 points lower even after accounting for socio-economic status. By contrast, Scottish immigrant students achieve at higher levels on average than their non-immigrant peers, scoring 25 points higher (22 points higher after accounting for socio-economic status). This suggests an unusual degree of inclusion by international standards. Moreover, immigrant students in Scotland scored among the highest for immigrant students internationally (in this case in mathematics), similar to Australia and Canada in this respect (Figure 2.7). Likewise, Scotland enjoys one of the smallest proportions of low performers among its immigrant students: only 16% compared with the much higher OECD average of 36%.

Both first and second-generation immigrants in Scotland performed better than their non-immigrant counterparts - by as much as 17 and 29 score points higher respectively, after accounting for socio-economic status. Speaking another language at home than English is not a barrier to the achievement of immigrant children. Immigrant students who spoke English at home (72% of immigrant students) indeed score the highest points in mathematics, but those who spoke another language than English at home obtained similar scores to achieve at higher levels than their native peers.

In general across OECD countries, immigrant students tend to be concentrated in schools in socio-economically disadvantaged areas. PISA data differentiates schools into advantaged, average and disadvantaged⁵. Scotland shows a different picture from the OECD norm: 8% of the students in the disadvantaged schools were counted as being of immigrant status but they made up 13% of the students in the more advantaged schools. Another way in which Scotland stands apart from the general international situation is that Scottish students who attended schools where the proportion of immigrant students was high (above 25% of the student population) performed as well as those where there were no immigrant students, before and after accounting for the socio-economic profiles of the students and the school. Therefore, the cultural diversity and the subsequent challenges that this diversity brings are not creating additional inequities in schools hosting high shares of immigrant students.

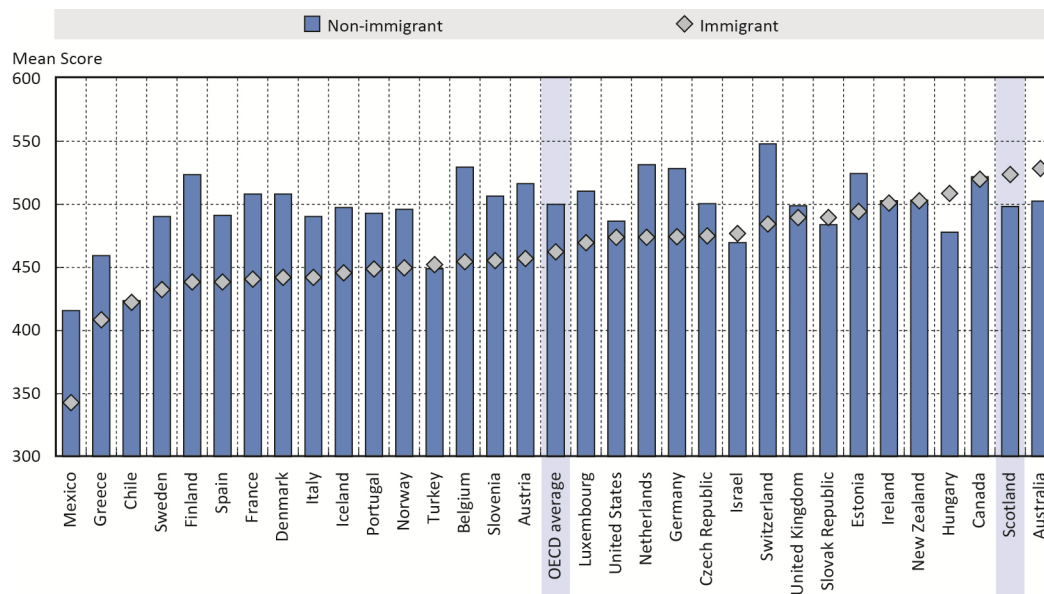
Figure 2.6 Share of “resilient” students in the total school cohort, 2003 and 2012



Notes: A student is classified as “resilient” if he or she is in the bottom quarter of the PISA index of economic, social and cultural status (ESCS) in the country of assessment and performs in the top quarter of students from all countries.

Data are sorted in descending order of the percentage of resilient students in 2012.

Source: OECD (2013a), *PISA 2012 Results: Excellence through Equity (Volume II): Giving Every Student the Chance to Succeed*, <http://dx.doi.org/10.1787/9789264201132-en>; OECD (2004), *Learning for Tomorrow's World: First Results from PISA 2003*, <http://dx.doi.org/10.1787/9789264006416-en>.

Figure 2.7 Mathematics performance by immigrant status in PISA 2012

Note: Countries are sorted by ascending order of scores of immigrant students. No data for Japan, Korea and Poland.

Source: OECD (2013a), *PISA 2012 Results: Excellence through Equity (Volume II): Giving Every Student the Chance to Succeed*, <http://dx.doi.org/10.1787/9789264201132-en>.

Achievement is patterned by gender

As in other OECD systems, educational achievement in Scotland is patterned by gender (OECD, 2015b). Girls tend to do better than boys in reading and boys do better than girls in mathematics and science. In 2012, Scottish boys were 27 points on average lower than girls in reading. While this difference is statistically significant, it is noticeably less than the 38-point gap - equivalent to almost one year of schooling - in OECD countries as a whole. So whereas boys lag behind in reading they do so less than in many other places. By contrast, boys scored 14 points higher in mathematics and 7 points higher in science than girls, both gaps being statistically significant and similar to the OECD average (11 and 2 score points, respectively). The gender gaps have remained broadly unchanged since 2003, except in mathematics, where girls performance relative to that of boys has somewhat deteriorated.

It is especially relevant to look at gender differences among the low-performing students (below Level 2) as this is where inequalities are most entrenched. In terms of reading, the share of low-achieving boys was at 16%, twice as large the comparable share among girls at 8%. These percentages are well down, however, on the overall OECD average shares (24% and 12%) albeit that here too the share for boys is double that for girls. In fact, only in Korea were the shares of low-achieving boys lower than that of Scotland. Rates were similar to Canada and Ireland. So, though there are gender differences in Scotland, they are smaller than those in most OECD countries.

Another common international finding is the gender gap in levels of engagement, drive, self-belief and motivation to learn mathematics: girls are more prone to low self-confidence in ability to learn mathematics than boys, even when they perform at similar levels (OECD, 2013b). Likewise, girls are more likely to report higher levels of

mathematics anxiety than boys. Scotland is no different in this regard than elsewhere as many more girls than boys report feeling helpless and emotionally stressed when dealing with mathematics. The HBSC survey shows that more 15-year-old Scottish girls feel pressured by schoolwork than boys (80% compared with 60%). Indeed, the degree of stress reported by girls is higher than at any time in the past 20 years (Currie et al., 2015).

Students in rural areas score higher

In OECD countries in general, students in rural areas do not enjoy access to equivalent educational resources and tend to have lower performance than their peers in urban settings. The situation is the reverse in Scotland. PISA 2012 shows Scottish students attending rural schools scored significantly higher in mathematics than their peers with a similar socio-economic status in schools located in a town (21 points difference – equivalent to 6 months of schooling) and similar to those in a city (18 points difference but not statistically significant)⁶. It might be thought that the better performance is due to the small relative numbers of rural students. However, in countries with a similar or smaller share of students in rural areas (e.g., Australia, Belgium, Hungary, Italy and Spain), rural relative achievement is not as favourable as in Scotland. This suggests that rural schools in Scotland are providing at least the same educational opportunities, if not better, compared with urban schools. Certainly, the review team was impressed by the work we saw in the Outer Hebrides, through Gaelic medium education and activities with local organisations, schools are helping to develop children's four CfE capacities and a strong sense of identity.

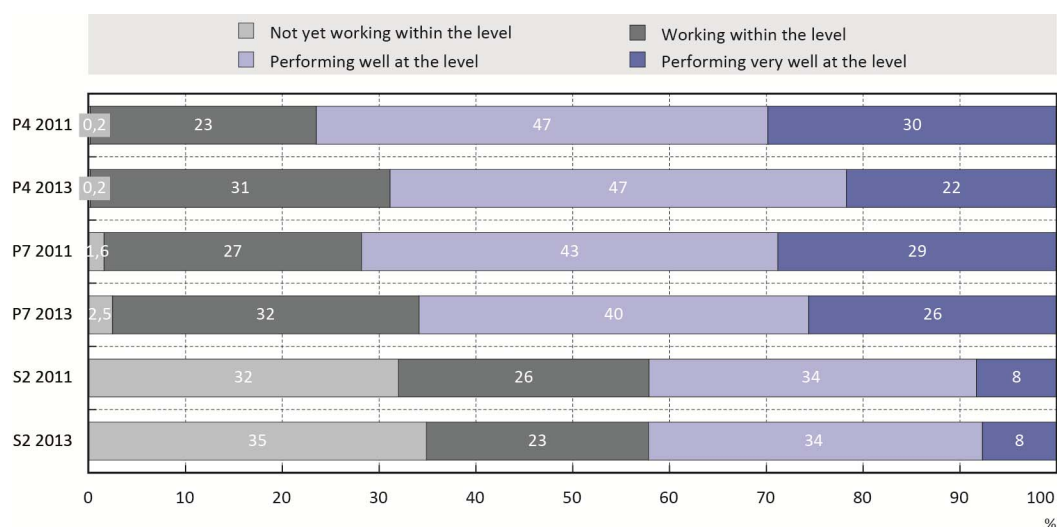
Quality and equity – the Scottish evidence

Quality, achievement and attainment

This review presents a selection of indicators generated within Scotland that shed complementary light on the quality of education relevant to Broad General Education. CfE aims at ensuring that all children and young people in Scotland develop four key capacities: successful learners, confident individuals, effective contributors and responsible citizens (Chapter 1).

Literacy and numeracy

Results from the Scottish Survey of Literacy and Numeracy (SSLN) show that the majority of students, at around 70%, in primary school stages 4 and 7 (P4 and P7) perform well or very well when assessed against the expected level in numeracy. However, the picture is less positive for students in secondary schools: only around 40% of students in secondary stage 2 (S2) perform at these high standards (Figure 2.8) This lower performance is partly due to the fact that at S2 the level being assessed covers three years: S1 - S3. At the same time, at the other end of the distribution, while less than 3% of students in P4 and P7 were not working at the expected level, the proportion was considerably higher in S2, with more than 30% of students classified at the lowest level of performance.

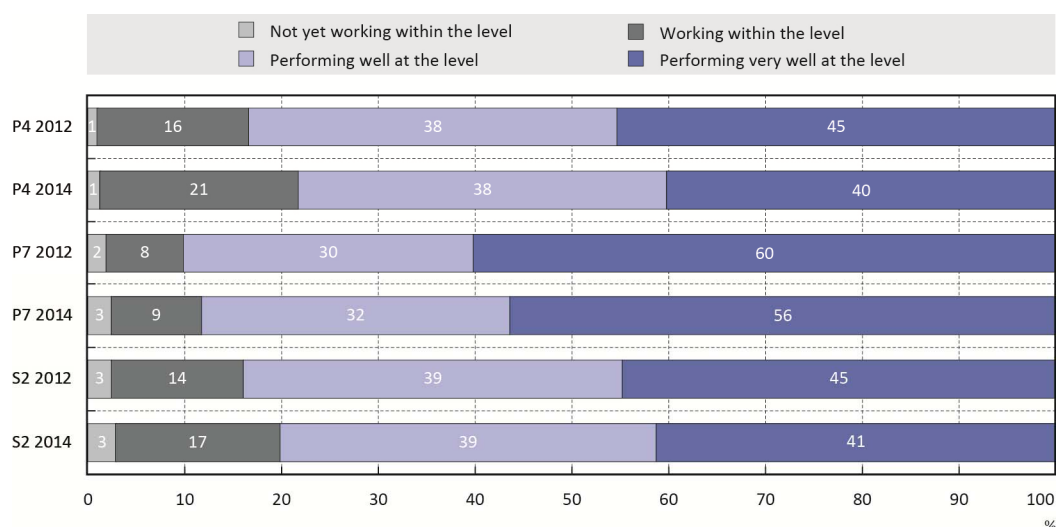
Figure 2.8 Levels of student performance in numeracy in the SSLN, 2011 and 2013

Note: Performing very well at the level: meeting almost all the outcomes at that level; Performing well at the level: meeting most of the outcomes at that level; Working within the level: meeting some of the expected outcomes for their level, but not yet meeting the others; Not yet working within the level: not yet meeting any of the CfE outcomes of the level assessed.

Source: Scottish Government (2014b), *Scottish Survey of Literacy and Numeracy 2013 (Numeracy)* www.gov.scot/Publications/2014/04/5692; Scottish Government (2012a), *Scottish Survey of Literacy and Numeracy 2011 (Numeracy)* www.gov.scot/Publications/2013/04/8843/0

SSLN shows that performance in numeracy actually declined between 2011 and 2013, although with a different pattern for children in primary and secondary schools (Figure 2.8). In primary schools, the drop was due to smaller numbers among the top performers in numeracy, which decreased by 10% (8 percentage points) and 8% (6 percentage points) in P4 and P7 respectively. In S2, the relative size of the top achieving group stayed the same but that of the low performers jumped by 9% (3 percentage points). For different reasons, therefore, there was a decline in levels of numeracy achievement in both primary and secondary education over this period.

For reading, the large majority of children in both primary and secondary schools perform at high standards with around 80% of students performing well or very well for their expected level (Figure 2.9). The proportions not at their expected level were low - less than 3% - at all three stages. Nevertheless, performance in reading also showed a decline between 2012 and 2014, visible in smaller relative numbers of top performers among both the primary and secondary students amounting to drops of 11% (5 percentage points) in P4, 6% (4 percentage points) in P7, and 8% (4 percentage points) in S2.

Figure 2.9 Levels of student performance in reading in the SSLN, 2012 and 2014

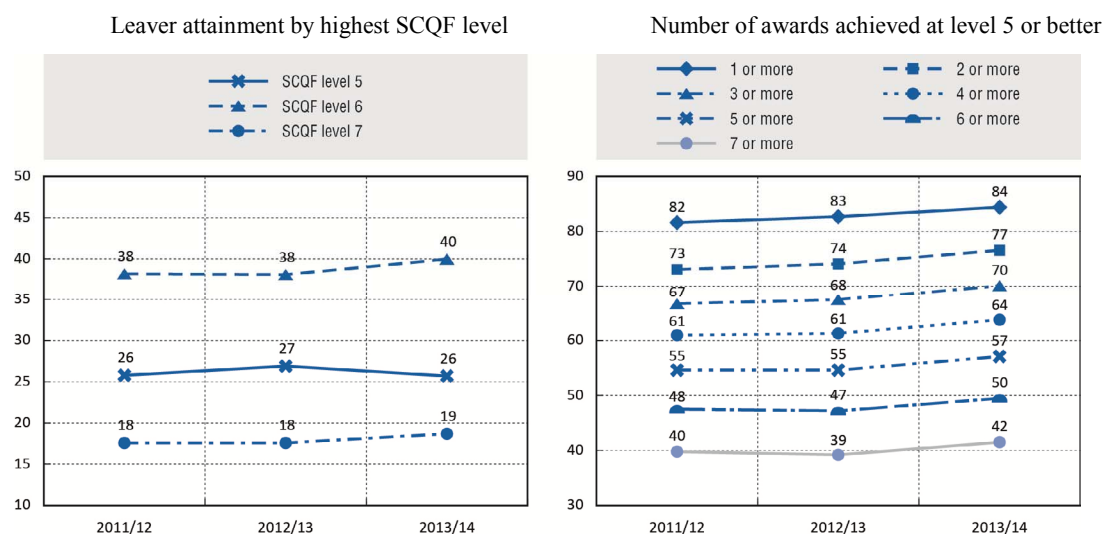
Note: Performing very well at the level: meeting almost all the outcomes at that level; Performing well at the level: meeting most of the outcomes at that level; Working within the level: meeting some of the expected outcomes for their level, but not yet meeting the others; Not yet working within the level: not yet meeting any of the CfE outcomes of the level assessed.

Source: Scottish Government (2015d), *Scottish Survey of Literacy and Numeracy 2014 (Literacy)* www.gov.scot/Publications/2015/04/7639 ; Scottish Government (2013), *Scottish Survey of Literacy and Numeracy 2012 (Literacy)*, www.gov.scot/Publications/2013/04/8843/0.

At the time of writing, it was only possible to analyse SSLN data using two points in time. These provide only initial insights of how achievement in numeracy and literacy is progressing and clearly additional waves are needed to better assess trends.

National qualifications and awards

The national qualifications and awards show how students master the curriculum across a range of subjects and skills. Fewer young people are leaving school with no qualifications: 1.7% attained no passes at Access 3/Standard Grade Foundation (SCQF level 3) or above in 2013/14, compared with 2.6% in 2009/10 and 5.4% in 1997/98 (Scottish Government, 2015a). 40% of school leavers from 2013/14, left with one or more passes at Scottish Credit and Qualifications Framework (SCQF) level 6 as their highest qualification, which is up slightly from 38% in 2011/12 (Figure 2.10, left hand). Similarly, the number of awards achieved among school leavers also shows an upward trend albeit over a relatively short period (Figure 2.10, right hand). For example, 84% of 2013/14 school leavers attained one or more awards at SCQF level 5 or better compared with 82% in 2011/12. Inspection reports highlight improvements in achievements across different contexts, including sport, culture and arts, enterprise, sustainability and citizenships. Increasingly these achievements are being accredited through a number of awards (Youth Scotland, 2011).

Figure 2.10 Percentage of school leavers by highest SCQF level and number of awards achieved, 2011/12 to 2013/14

Source: Scottish Government, (2015), *Summary statistics for attainment, leaver destinations and healthy living*, 2014 and 2015, Scottish Government.

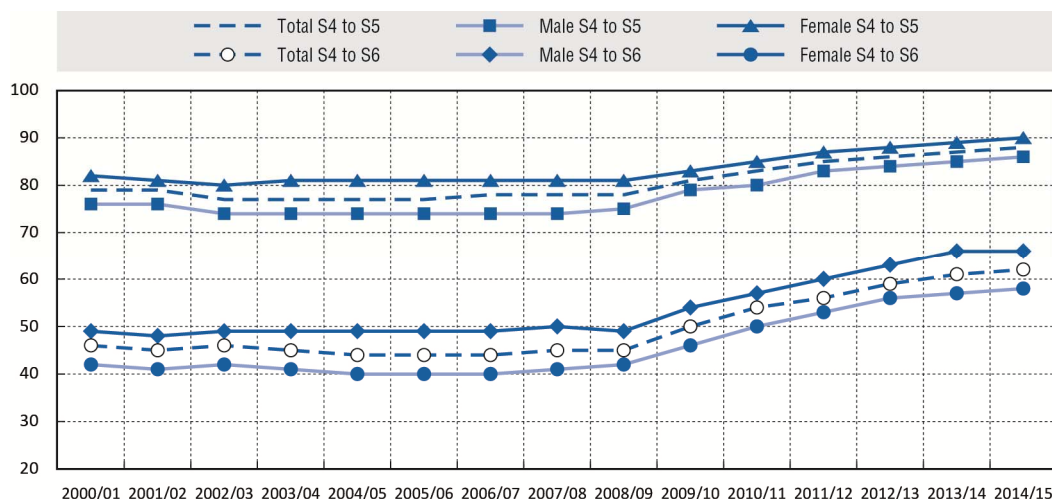
Students in Scotland can leave school at the age of 16 or they can stay in secondary education for one or two more years (S5 and S6).⁷ In the early 2000s, staying-on rates were pretty stable with slightly under 80% of S4 students staying onto S5 and almost 50% staying onto S6. However, there has been a significant continuous increase in the proportion of students pursuing further study (Figure 2.11). In 2014, 88% of S4 students from 2012 stayed on to S5 and 62% of S4 students from 2011 stayed on to S6. This represents an increase of 6% (5 percentage points) and 15% (8 percentage points), respectively, from the levels observed in 2010/11 when CfE was first implemented. This positive trend actually started in 2008/09 (so before CfE was implemented), and has continued since. Figure 2.11 also shows a higher proportion of girls staying on in post-compulsory education than boys (gender and attainment are further discussed in the next section).

Positive destinations

There have been extensive efforts to widen the opportunities for young people who do not want to follow an academic path, at least not immediately. These efforts, combined with the improving labour market, have resulted in rising numbers of positive destinations of young people once they exit school. In March 2014, over 9 in 10 (92%) of school leavers were identified as having entered a positive follow-up destination, whether in higher education, further education, training, voluntary work, activity agreements or employment.⁸ The majority of 2013/14 school leavers (63%) were in higher or further education (divided between 39% in higher education and 24% in further education); 4% were in training, an activity agreement or doing some voluntary work; and 25% of young people leaving school were in employment 9 months after they had left school. The trend for the proportion of school leavers in positive follow-up destinations has been upwards continuously since 2007/8, when only 84% of young people were counted as having entered a positive destination. The 8% of young people not in a positive follow-up destination in 2014 were unemployed, in which the large majority (around 8 in 10), were

actively seeking employment. Levels of unemployment have decreased significantly - almost halved - since 2007/8, when 15% of school leavers were unemployed (Scottish Government, 2014a).

Figure 2.11 Staying-on rates in publicly-funded secondary schools in Scotland, 2000/01 to 2014/15



Source: Scottish Government, (2015), *Summary statistics for attainment, leaver destinations and healthy living, 2014 and 2015*, www.gov.scot/Publications/2015/06/2579.

Health and well-being

National information on health and health-related behaviours of young people is gathered through the *Scottish Schools Adolescent Lifestyle and Substance Use Survey* (SALSUS)⁹ complementing those obtained through the international HBSC survey. These data show that the great majority (88%) of 13- and 15-year-olds in Scotland reported being in good health in 2013. More than two-thirds (68%) of the adolescents surveyed agreed that their school provides them with advice and support regarding smoking, alcohol consumption and drug use. This is reflected in the progress made in reducing substance use. In 2013, the levels of regular smoking, alcohol drinking and drug use were at the lowest levels recorded since the survey started collecting these data (Scottish Government, 2014b).

The *Behaviour in Scottish Schools* qualitative study¹⁰, conducted in 2012, provides some insights into the behaviour of students in primary and secondary schools (Scottish Government, 2012b). Overall, students are viewed to be well behaved apart from a small minority of pupils who are considered to be disruptive. Staff assessments of overall levels of good behaviour have been high since the initial 2006 study and both low-level disruptive behaviour and serious disruptive behaviour/violence show a downward trend. Similarly, there is a positive trend in greater use of approaches to promote positive behaviour. However some aspects of behaviour that are still of concern include:

- A small, but increasing, number of children entering primary school with complex difficulties, including nurture and attachment issues.
- A perceived increase in the incidence of severe mental health issues, Attention Deficit Hyperactivity Disorder (ADHD), and autistic spectrum disorders.

School quality

Education Scotland's inspection reports judge that the majority of pre-school centres and schools meet quality standards. Around two-thirds of the inspections resulted in “good or better” on three quality indicators in 2013: 1) improvements in performance; 2) learner experiences; and 3) meeting learning needs (Scottish Government, 2015b). As many as one in five schools received only a “satisfactory” evaluation and a smaller but non-trivial share (6% of early learning centres and 10% of schools) did not meet the quality criteria, indicating weak or unsatisfactory provision. The latest summary of these reports indicate that:

- Pre-School Centres: most (94%) are rated as having a “satisfactory” or better performance in all quality indicators (20% satisfactory; 42% good and 32% very good) and 6% do not meet positive criteria. A higher proportion of pre-school centres received satisfactory ratings in the first post-baseline inspections (conducted between 2011 and 2014) compared with the baseline inspections (conducted between 2008 and 2011)¹¹. Qualitative evidence reported in recent inspections (2014-15) single out children’s engagement and motivation for learning as particularly positive outcomes.
- All schools (primary, secondary, all-through and special): most (90%) are rated as having a “satisfactory” or better performance in all quality indicators (21% satisfactory; 45% good and 20% very good) and 10% do not meet positive criteria. Qualitative evidence from recent inspections (2014-15) showed that most primary schools were improving learners’ experiences compared with the earlier comparison period (2008-2012); schools were investing in meeting the needs of children with additional support needs; pupils in primary school are experiencing more active approaches to and being more engaged in their learning; and there are wider opportunities to learn in and out of school.

These inspection reports are published on *Education Scotland's* website and are also publicly available for parents at Parentzone Scotland.

The equity picture

Inequalities in outcomes begin early in life and before children start compulsory school: poor children are disproportionately exposed to a myriad of factors that can impair cognitive, social and emotional development (Feinstein, 2003; Bradbury et al., 2011; Garcia, 2015). In Scotland, around 14% of children were living in poverty in 2014 (below 60% of median income), (Chapter 1). These children are more likely to under-achieve in and out school. One international study found gaps in readiness to learn and behavioural development in the early years between advantaged and disadvantaged children in the four countries studied (Australia, Canada, the United Kingdom, and the United States), (Bradbury et al, 2011). The disparities in Australia and Canada, however, were consistently smaller than those found in the United States and the United Kingdom.

Looking more specifically at Scotland, *Growing up in Scotland* shows that gaps are evident at the age of three (Bradshaw, 2011) and at the age of five children (Scottish Government, 2015c) who grow up in the lowest income quintile:

- Around 13 months behind in their knowledge of vocabulary and ten months behind in their problem-solving than children in the highest income quintile.

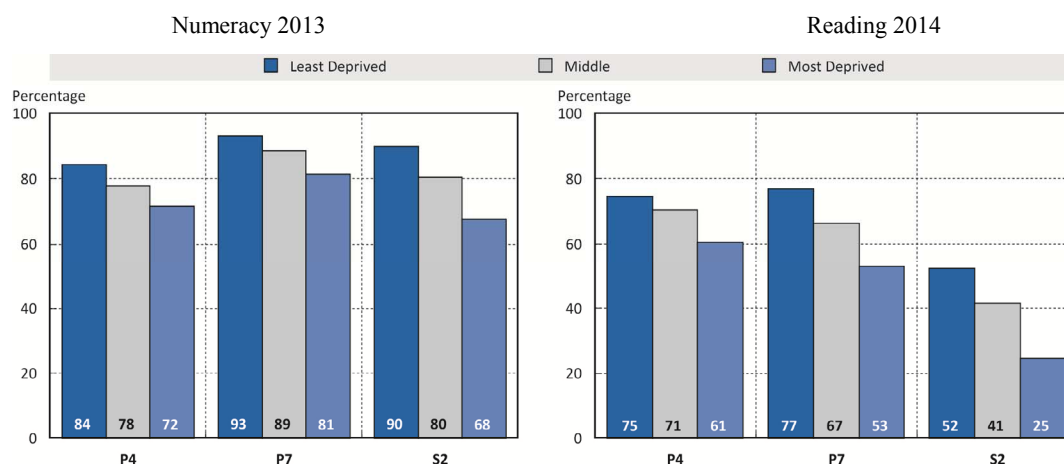
- 43% of children in the lowest income quintile presented abnormal ranges for conduct problems compared with 19% of children in the highest income group.
- 16% of children in the lowest income quintile presented emotional problems compared with 6% of children in the highest income group.
- 39% of children in the lowest income quintile reported a poor diet compared with 13% of children in the highest income group.
- 26% of children in the lowest income quintile reported less than good health during first four years compared with 12% of children in the highest income group.

These gaps widen as children move up the school system. What children learn and what they do accumulates as they get older (Kautz, et al., 2014). Such gaps pose particular challenges to education systems. As summarised in the next section on “Closing the Gap”, combatting the impact of poverty has been a prominent priority in Scotland, including notably offering free provision of pre-school from the age of 3 and from the age of 2 to the poorest households. Scotland’s system of near-universal pre-school education is a key element in addressing the early education gaps. In 2014, 98.5% of eligible 3- and 4-year-olds were registered for early learning and childcare places (Scottish Government, 2015d). These rates are considerably higher than those in the typical OECD country (77% of 3- to 4-year-olds). Only Belgium, Denmark and France had similar or higher enrolment rates for 3- and 4-year-olds (OECD, 2015c).

Socio-economic status is closely linked to outcomes

The Scottish Survey of Literacy and Numeracy (SSLN) shows that there is a clear relationship between living in a deprived community¹² and academic achievement (Figure 2.12). Students in areas of least deprivation have significantly higher achievement levels in literacy and numeracy than those in the most deprived areas, at all the stages covered by the surveys (P4, P7 and S2). These achievement gaps widen as pupils and students advance. P4 pupils in the most deprived areas in 2013 were around 20% less likely (14 percentage points below) to be performing “well or very well at the level” in *numeracy* than their classmates in the least deprived areas. Those in the most deprived areas were 30% less likely (24 percentage points lower) to be performing well in P7; and half as likely (28 percentage points higher) in S2. Such gaps widened with age in *reading* as well, though they were less marked than in numeracy: the comparable gaps were 15% (13 percentage points) in P4; 13% (12 percentage points) in P7; and 25% (22 percentage points) in S2. The main change in this case is seen between primary and secondary, whereas for numeracy the main change was between P4 and P7.

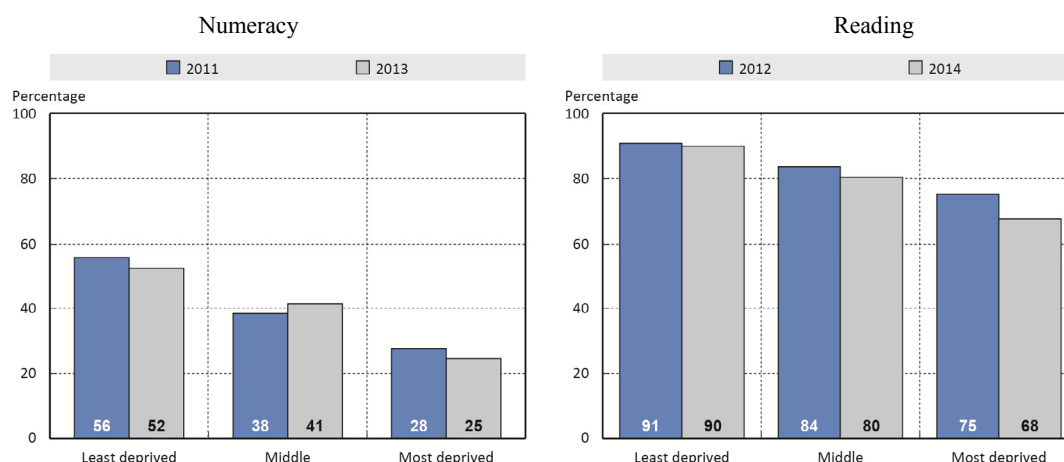
The achievement gap between the least and most deprived also increased – got worse – in the second round of the SSLN for some stages (2013 for numeracy – P7 only – and 2014 for reading – S2 only) compared with the first one (in 2011 for numeracy and 2014 for reading). In *numeracy*, achievement levels declined for all deprivation groups, but the biggest drop was seen amongst the most deprived students. In *reading*, the drop in achievements were smaller than those for numeracy in the primary years but not smaller in secondary S2, where children from most deprived areas fell the most in achievement (Figure 2.13).

Figure 2.12 Proportion of pupils performing well or very well by deprivation category and stage

Source: Scottish Government (2015d), *Scottish Survey of Literacy and Numeracy 2014 (Literacy)* www.gov.scot/Publications/2015/04/7639, Scottish Government (2014b), *Scottish Survey of Literacy and Numeracy 2013 (Numeracy)*, www.gov.scot/Publications/2014/04/5692.

Students in the most deprived areas are also less likely to obtain national qualifications and awards, to achieve high tariff scores¹³, and to enter and stay in a positive destination than their peers living in less deprived areas. In 2012/13, on average 39% of S4 students in Scotland from all areas and not only the least deprived achieved 5 awards at level 5; the comparable rate for students from the most deprived areas is very nearly half that level (20%) (Scottish Government, 2014). The percentage of young people who go into a positive follow-up destination also drops in areas with higher levels of deprivation: whereas the quasi-totality (97%) of young people went into a positive follow-up destination in the least deprived areas in 2013/14 this drops to 85% for those living in the most deprived areas. The linear relationship between deprivation and attainment has been broadly stable over several decades (Scottish Government, 2015a).

Education Scotland HM Inspection reports record differences in school quality by level of deprivation.¹⁴ Among primary schools, inspectors judge that about 1 in 12 schools (8%) are deemed unsatisfactory in the least deprived areas but this rises to 15% in the most deprived areas. The gap between the most and least deprived areas is higher still for secondary schools: 1 in 10 schools in the least deprived are judged to be unsatisfactory but this increases to nearly three times this level (29%) in the most deprived areas (Education Scotland, 2012).

Figure 2.13 Performance of pupils in S2 performing well or very well by deprivation category, 2011/12 – 2013/14

Source: Scottish Government (2015d), *Scottish Survey of Literacy and Numeracy 2014 (Literacy)* www.gov.scot/Publications/2015/04/7639; Scottish Government (2014b), *Scottish Survey of Literacy and Numeracy 2013 (Numeracy)*, www.gov.scot/Publications/2014/04/5692.

The gender gap – girls outperform boys in most but not on all outcomes

Scottish evidence shows that girls tend to outperform boys in most measured aspects of achievement and attainment, and that these gaps tend to widen as students advance. SSLN results reveal that girls outperform boys in *reading* in both primary and secondary school, with the largest gaps observed in the numbers of top performers: 43% of girls in P4 were assessed to achieve very well in 2014, but only 37% of the boys. Girls are more likely than boys to continue their studies after compulsory schooling is completed at the end of S4, as well as to complete S5 and S6; and obtain the qualifications required for entry into higher education. Girls' higher achievement and attainment levels are mirrored in their higher chances than boys to enter and stay in a positive destination, though the gap on this is not large (93% compared with 91%).

An exception to this female advantage is in *numeracy*, which is important given its relation to later opportunities. SSLN data show that boys perform slightly better on this than girls. In S2, a significantly higher proportion of girls is not yet working at the expected level in maths compared with boys (37% and 33%, respectively), and girls' mathematics achievement in S2 dropped between 2011 and 2013. This drop reflected a rising share of low performers among girls (from 32% to 37%), whereas for boys this share remained unchanged (32%) between 2011 and 2013. This might be related to the higher anxiety levels reported by 15-year old girls both in PISA 2012 and HBSC 2014.

Ethnic minorities perform higher, but not all do

Unlike the common international finding that ethnic minorities have higher numbers of lower achievers, Scottish data reveal that most ethnic minority students outperform their white Scottish peers. Students of Asian origin, especially Asian Chinese, obtained *higher tariff scores* in S4 and are more likely to be in a *positive follow-up destination* than white Scottish students (99% versus 92%, respectively). At the same time, Asian-Pakistani, black Caribbean and African pupils perform below other ethnic groups. The strong performance of ethnic minorities in Scotland is also observed in tertiary education

- each ethnic minority group with the exception of white-Gypsy/Travellers is more likely to hold a *degree qualification* than their white-Scottish peers¹⁵.

City schools behind, but the gap is narrowing

Scotland has a relatively high share of its population living in cities (Chapter 1). There are differences in students' achievement and attainment by degree of urbanisation, with students living in the countryside and smaller towns outperforming their urban peers. This is captured in the difference in the average tariff scores in S4 as well as in the percentage of school leavers in positive follow-up destinations (96% of positive destinations in remoter rural areas compared with 91% in large urban areas). This gap is not new, was observed well before the CfE was implemented, and in recent years it has narrowed gradually.

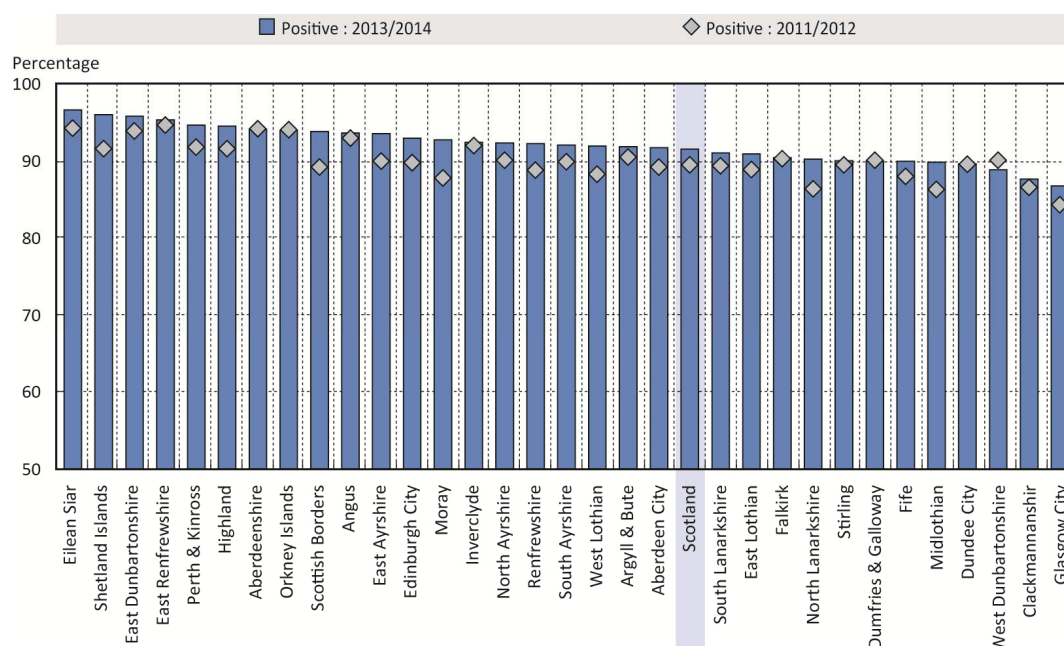
Attainment and achievement levels vary across local authorities

Comparisons of performance by the different local authorities are limited, especially for younger pupils in primary and lower secondary schools¹⁶, though they can be made between local authorities using indicators relating to the latter stages of secondary school. For example, the proportion of young people leaving school with *no qualifications* is very low in Scotland but it was seven times higher in South Lanarkshire (2.8%) than in East Renfrewshire (0.4%) in 2013/14. These two local authorities also have very different profiles: the former (South Lanarkshire) has one of highest shares in the most deprived quintile of the SMID¹⁷ (Scottish Index of Multiple Deprivation), while East Renfrewshire these are among the lowest. But it is not only about deprivation, as local authorities with relatively modest shares of the most deprived quintile, such as Clackmannanshire and the Shetland Islands, also report greater shares of students leaving school with no qualifications (4.1% and 2.6%, respectively).

The proportions *gaining 5 or more awards at Level 5 in S4* also differed across councils – and with considerably greater percentages – amounting to a 43 percentage-point range. In 2012/13, less than 30% of S4 students in Clackmannanshire, Dundee City and Glasgow City achieved 5 or more awards at Level 5, while more than 60% did so in East Dunbartonshire and East Renfrewshire (Scottish Government, 2015a). It is not considered appropriate to continue the comparisons with more recent time points because of the significant changes in curriculum models at this stage in many schools with some students choosing to take fewer qualifications at this stage or to by-pass qualifications at S4 altogether. However, such recently-published figures give some measure of the scale of differences by local authority area referring as it does to the situation only two years ago.

Levels of positive follow-up destinations also vary across local authorities (Figure 2.14). In 2013/14, the highest rates were recorded in Eilean Siar, Shetland Islands, East Dunbartonshire and East Renfrewshire, with more than 95% of school leavers finding positive destinations in comparison with less than 90% in Dundee City, West Dunbartonshire, Clackmannanshire and Glasgow City, at the other end. Disparities across local authorities in relation to school leavers have reduced markedly.

Figure 2.14 Percentage of school leavers in a positive follow-up destination by local authority, 2011/12 and 2013/14

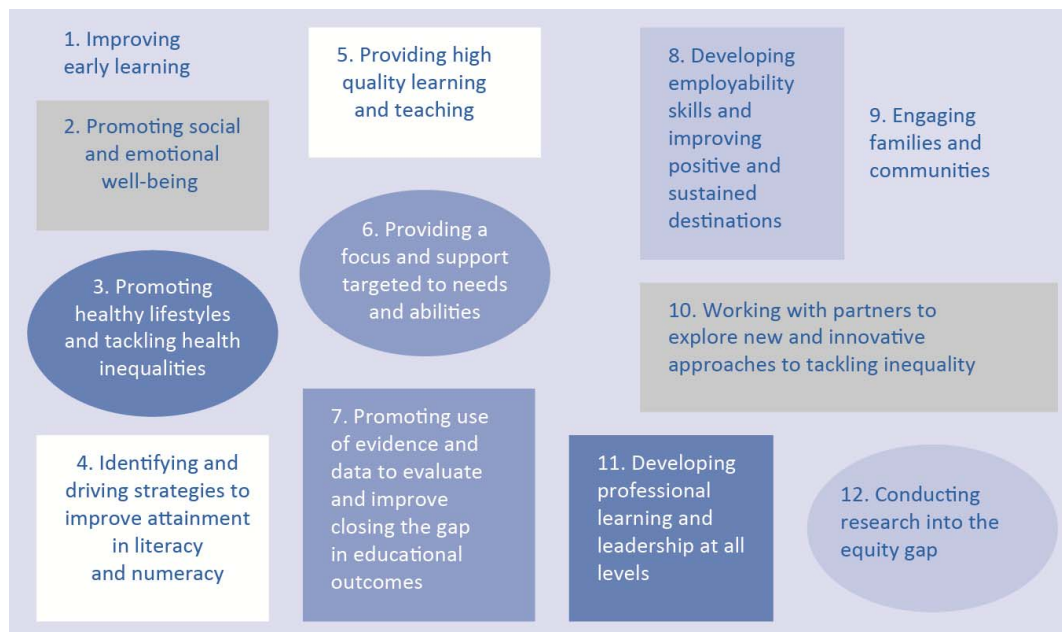


Source: Scottish Government (2014d), *Summary statistics for attainment, leaver destinations and healthy living, No.4: 2014 Edition* www.gov.scot/Publications/2014/06/9242; Scottish Government (2013b), *Summary statistics for attainment, leaver destinations and healthy living, No. 3: 2013 Edition*, www.gov.scot/Publications/2013/06/7503/

Closing the gap?

Policy axes for promoting educational quality and equity in Scotland

This section summarises the multiple and diverse approaches in place for enhancing quality and equity in Scotland. They address numerous targets and equity issues, some of them are Scotland-wide in scope whereas others are more local. Many involve partnerships, including with partners who might often be regarded as external to education. There are twelve policy axes for addressing equity: 1) improving early learning and childcare; 2) promoting emotional and social wellbeing; 3) promoting healthy lifestyles and tackling health inequalities; 4) identifying and driving strategies to improve attainment in literacy and numeracy; 5) providing high quality learning and teaching; 6) providing a focus and support targeted to needs and abilities; 7) promoting use of evidence and data to evaluate and improve closing the gap in educational outcomes; 8) developing employability skills and improving positive and sustained destinations; 9) engaging families and communities; 10) working with partners to explore new and innovative approaches to tackling inequality; 11) developing professional learning and leadership at all levels; 12) conducting research into the equity gap (Figure 2.15). (Sources for the different strategies and initiatives are contained in Annex 2.A1).

Figure 2.15 Approaches to promote equity in schools in Scotland

Source: Scottish Government (2015b), *OECD- Scotland Education Policy Review: Country Background Report*

Improving early learning and childcare: developing strength and resilience with entitlement and support for vulnerable children:

- Scottish Government's interrelated policy frameworks - The Early Years Framework (2008), Equally Well (2008) and Achieving Our Potential (2008).
- The Getting It Right for Every Child (GIRFEC) approach - policy and delivery of services at national and local levels.
- Early Level of CfE (from 3 years until the end of Primary 1): promoting continuity and progression.
- The Children and Young People (Scotland) Act 2014 strengthens early years support in children's and families' lives.

All these initiatives are holistic around the wellbeing of the child, each one bringing in the different stakeholders and partners in early learning. From August 2015, a major achievement of such initiatives is the extension of free provision of pre-school from the age of 2 to the poorest households who meet the free-school-meal entitlement.

Promoting social and emotional wellbeing These initiatives deal with wellbeing in the learning environment and enhancing school climate, some are wider and deal with inclusiveness in general or emotional literacy and pro-social behaviour, others focus on themes such as bullying or exclusion, some deal with a specific level of education (e.g. nurturing schools).

- *Creating a positive learning environment through positive relationships and behaviour* is seen as the responsibility for everyone within each community of

learning, with interventions fostering the development of multiple skills. Relevant programmes or activities include:

- Better Relationships, Better Learning, Better Behaviour 2013 (Scottish Government, 2013)
- Framework for Intervention/Staged Intervention with a wide range of supporting documents to manage low-level disruptive behaviour.
- A national approach to anti-bullying.
- The *Motivated School* approach to develop student autonomy and motivation.
- The Solution-Oriented Approach with two national developments: Towards Solution Oriented Children's Services (TSOCS) and the Solution Oriented Schools (SOS) programme.
- *Restorative approaches*: a framework to promote harmonious relationships and resolve conflict.
- *Being Cool in School*: a programme for emotional literacy and teaching pro-social behaviour.
- Glow: access to technologies for all learners taking account of differentiated learning opportunities.
- *Nurturing schools and Nurture groups*: emphasis within a nurture group is on emotional growth; this approach has continuously grown in primary schools and early years centres, and is now increasingly emerging in secondary schools.
- “*Included, Engaged and Involved: attendance in Scottish schools*”: guidance for LAs, schools and learning centres on how to promote engagement, including those at risk of poor attendance.

Promoting healthy lifestyles and tackling health inequalities: These initiatives are focused on health issues. Some initiatives involve schools (*Better Eating, Better Learning*); others are for communities (CLD); some are national (*Food for Thought Fund*); others are for LAs (free school meals).

- Free school meals: This is to ensure that children and young people with an income-based benefit get access to nutritious food at school. LAs have the duty to promote school meals under the Schools (Health Promotion and Nutrition) (Scotland) Act 2007.
- There are numerous actions to extend free-school-meal eligibility including, from January 2015, free school meals being offered to all children in Primary 1 to 3. The Food for Thought Fund supports practitioners to improve learning and teaching within food.
- Better Eating, Better Learning: a framework for improving school food and for children and young people to learn about the importance of food to health and wellbeing.
- Community learning and development (CLD): working with families and partners to address health inequalities in communities. Each LA works with partners and communities and publishes a CLD plan every three years.

Identifying and driving strategies to improve attainment in literacy and numeracy.

These initiatives are focused on literacy and numeracy, increasing opportunities to access learning, achievement and employment. Some initiatives help to identify the pupils at risk (Primary One Literacy Assessment and Action Resource (POLAAR)), some focus on awareness (“Read, Write and Count” literacy campaign), some focus on actions (Literacy Action Plan, 2010); some are regional (literacy hubs) and others are national (national numeracy hub).

- *Skills in literacy and numeracy for accessing learning, achievement and employment:* Literacy Action Plan 2010 (final report in Spring 2015) with policies, improvement activities and programmes on literacy and numeracy. “Read, Write, Count”: a literacy campaign for P1 to P3 children and their families (launched in August 2015). POLAAR is a tool designed to identify and assess children at risk of developing difficulties with reading and writing.
- *The Literacy Hubs:* five local authorities (Edinburgh, Fife, Highland, North Lanarkshire and West Dunbartonshire) share expertise on literacy, enhanced practice, more robust evaluation and increased inter-authority working and sharing good practice.
- *National Numeracy Virtual Hub* (launched in Spring 2015): key documents and research to support practitioners; to provide equal access for all authorities, establishments and individuals to high-quality career-long professional learning; and support moderation of national standards.

Providing high quality learning and teaching: CfE and “Teaching Scotland’s Future” received a wide range of support. This report is a review around the skills and qualities of teachers and leaders, initial teacher education, and continuing professional development for teachers. It also discusses policies to attract high quality teachers, able to deal with diversity and equity issues in schools and classrooms.

Providing a focus and support targeted to needs and abilities: *Additional Support Needs* legislation and *Getting it Right for Every Child* initiatives are within the duty of LAs, but the standards for personalising support and learning are set Scotland-wide. Different national initiatives focus on specific target groups (gypsy/travellers, LGBT (lesbian, gay, bisexual, transgender), or looked-after children with the Centre For Excellence for Looked-after Children (CELCIS). While some are more general (pupils from disadvantaged backgrounds), some are general funds allocated to research (Scottish Funding Council); others are funds targeted at schools (The Access to Education Fund since 2015 extended to help more learners); and others are targeted programmes to specific communities (e.g. Scottish Traveller Education Programme or STEP, which provides support to travelling communities in Scotland).

Promoting use of evidence and data to evaluate and help close the gap in educational outcomes: *Insight* is the new online tool used to benchmark, analyse and compare data relative to performance in secondary schools in a range of qualifications achieved in the Senior Phase of *Curriculum for Excellence*. The tool uses measures of post-school participation, attainment in literacy and numeracy, general attainment, and tackling disadvantage by addressing low attainers. Additional measures on curriculum areas, subjects and courses are also available for use at school level.

Developing employability skills and improving positive and sustained destinations: These initiatives are actions and programmes taken to support students at risk of dropping

out; developing the skills for employment; and encouraging choices in line with students' aspirations and capacities.

- Framework from CfE: “Building the Curriculum 3 and 4” is about creating opportunities to develop skills for learning, skills for life and skills for work; it is designed to be embedded within the Es and Os across all curriculum areas throughout all phases (3-18).
- Partnerships between schools, colleges, employers and other national and local organisations.
- Young people who are at risk of not having a positive destination when they leave school can take part in a pre-employment training programme. These programmes are resourced by the Employability Fund, often run by colleges and, in some cases, by private training providers.
- Developing the Young Workforce: there were 39 recommendations of the Commission for Developing Scotland's Young Workforce. Scotland's Youth Employment Strategy took effect at the end of 2014 with the agreement of partners.

Engaging families and communities: In CfE, parental involvement is critical in developing the four capacities, skills, health and social and emotional wellbeing. The *Raising Attainment Programme* and “*Play, Talk, Read*” and the forthcoming “*Read, Write, Count*” programmes all focus on parental engagement in children's learning and development. “Parentzone Scotland”, “Engaging with Families” and the Scottish Qualifications websites give support and advice to teachers and parents. The Community Learning and Development work is often done with parents through family learning programmes to enable local initiatives and parental engagement. Many LAs are reaching out and are involving parents who are more difficult to engage.

Working with partners to explore new and innovative approaches to tackling inequality. These initiatives focus on raising attainment levels in Scotland and help to build the evidence base on how it can be done. Some are targeted on the early years (EYC), others on schools (raising attainment for all); others are focused on the outreach taking the form of a network (SIPP). They are available in all areas of Scotland, though the Scottish Attainment Challenge is targeted at the most deprived areas.

- *Early Years Collaborative:* The Early Years Collaborative (EYC) brings practical support to local partners to accelerate conversion of the high-level principles set out in *Getting it Right for Every Child (GIRFEC)* and the Early Years Framework into practical actions. This is a multi-agency, local quality-improvement programme.
- *Raising Attainment for All:* based on the Improvement Framework for Scotland's Public Services to enhance performance, raise attainment and close the equity gap. The aim is to support consistent improvement in achievement and attainment through a collaborative learning system which enables shared learning across the country. Twenty four LAs and over 180 schools have so far joined on a voluntary basis.
- *Scottish Attainment Challenge:* early 2015, backed by the Attainment Scotland Fund with GBP100 million over the next four years. The first beneficiaries of the fund are the seven local authorities with the highest concentrations of students in deprived areas. Attainment Advisors work with local authorities, schools and local

communities to generate high quality and professional learning. It is directed specifically to improve outcomes in primary schools.

- *School Improvement Partnership Programme (SIPP)*: powerful national network focused on tackling educational inequity – Education Scotland working with local authorities and university researchers to support these partnerships.

Developing professional learning and leadership at all levels. There is a strong focus and commitment of education leaders to tackling inequality and promoting professional values and personal commitment to social justice.

Conducting research into the equity gap. This is especially about generating accessible advice for practitioners and professional learning communities to develop an understanding of the impact of deprivation and of ways to minimise its impact. Examples are: The Annual Report on the Child Poverty Strategy (Scottish Government, 2014a); School Improvement Partnership Programme Phase 1 Evaluation Report (Chapman et al., 2014); Closing the Attainment Gap in Scottish Education (Sosu and Ellis, 2014); and Learning lessons: young people’s views on poverty and education in Scotland (Elsley, 2014).

Reflections on “closing the gap”

Given that “closing the gap” features so prominently in educational debate and policy-making in Scotland, it is natural that we discuss it in this chapter. It is about both quality and equity as questions of equity and distribution must be considered in relation to the quality of provision and learning in question. It extends well beyond the *Curriculum for Excellence per se* as it touches on all aspects of educational policy, and indeed on the wider society, economy and culture. We have seen from the review of evidence in this chapter that equity aims and inclusivity have featured prominently in Scotland, with numerous policies and programmes. The final summary shows that equity and inclusivity feature prominently among the positive features and achievements identified.

We are not in a position to offer serious comment on the many programmes summarised under the 12 headings in this section: we do not have evaluative evidence and to do so would have required a very different form of review exercise from the one we undertook. Nevertheless, we feel able to offer the following observations.

- First, the array of actions is impressive. It is especially important to engage with families and communities as is being done in Scotland. Mixing general strategies aimed at schooling, skills and teaching with specific targeted strategies aimed at the stubborn problems found in deprived communities is surely correct. As is the priority given to early learning and laying the foundations on which subsequent educational achievements can be built.
- We might ask, however, about the strategic threads running through the many different programmes and policies so as to avoid a scattergun approach and to ensure that these many different actions are working efficiently and being effective. And, there is the question of the research and evaluation being conducted to provide an evidence base to inform strategic direction for the different actions: how adequate are they?
- Second, despite the plethora of programmes and actions, we wonder whether there is yet enough focus on the fundamental nature of the teaching and learning experience

– described in OECD work as the “pedagogical core” (OECD, 2013c; OECD, 2015d) – especially as experienced by those pupils and students, and in those schools, which experience the highest levels of disadvantage and deprivation. We see here an enormous potential of innovation, and with research playing an essential role in clarifying what such enriched experiences should be and how best achieved. Given that there are particular challenges identified in this chapter at the secondary level, this might be the priority for innovating the “pedagogical core” and the learning environments provided in schools (without neglecting the earlier stages). This is included as one of the recommendations in Chapter 4.

“Closing the gap” as a concept needs close attention. For one thing, as we have seen there is not one gap but many: the language of “the” gap may misleadingly suggest that it is self-evident which gap should be the main target or that one gap may stand as an adequate proxy for many others. We heard, for instance, interchangeable reference to “achievement gaps” and “attainment gaps”. “Achievement” refers to the acquisition of knowledge, competences and capabilities in learners, which knowledge, competences etc. may be narrowly or more broadly defined. “Attainment” depends on education systems and institutions, and refers to such matters as retention, qualifications, destinations etc. The two are not unrelated, of course, but they are far from identical.

“Closing the gap” may well embody the commitment that a pupil or student or a school located in one area or community of Scotland should not be penalised through diminished opportunities compared with those in another. The tangibility of a measurable gap to be reduced helpfully focuses on unacceptable inequality. In the chapters that follow, especially Chapter 3, we are particularly concerned that those local authorities which perform less well than others facing similar social and economic challenges should be identified and come to work in partnership with others which are facing those challenges more successfully.

There are contexts, however, where the ambition should not only be to close gaps but also to “*raise the bar*” for all. This is the dual emphasis on quality and equity as reviewed in this chapter. A curriculum like CfE which leaves considerable discretion in its implementation might mean that the more privileged students, parents, schools and communities make progress first. The challenge for policy is first to ensure that gaps do not actually become exacerbated and, having done that, both to raise the bar and close the gaps simultaneously.

How might this be done? Partly, it is about applying the policies and programmes reviewed in this section, being rigorous about their effectiveness and identifying the strategic synergies between them so that, as a whole, they add up to more than each one taken separately. It is also about being rigorous in gathering and using evidence on student learning outcomes and progression to complement the strong focus on formative assessment and professional judgements as argued in Chapter 5. It is about creating learning environments especially in secondary schools that really engage the pupils and students facing the greatest challenges – a theme we pick up in Chapter 4.

Summary of the data analysis of quality and equity

We bring the many different findings, generated through international and Scottish sources, together in this section. There are many positives: the picture regarding equity shows Scotland doing well in many respects and attainments have risen steadily for around the past eight years. There are greater grounds for concern regarding achievement

levels, though to the extent that this relies on PISA data for which the most recent survey took place in 2012, it will be important to see how these have altered during the period that includes the full implementation of CfE in the next PISA survey done in 2015.

Positive features and developments in Scottish schooling

Levels of academic achievement above international averages, with narrower spread

A snapshot of Scotland's performance in the most recent PISA surveys shows Scottish 15-year-olds to be above the OECD average in reading and science, with higher science achievement levels stable since 2006.

For reading, the large majority of children in both primary and secondary schools perform at high standards with more than 80% performing well or very well for their expected level. The lowest performers in reading represented a very small proportion - less than 3% - in P4, P7 and S2.

The achievement levels of Scottish 15-year-olds are spread relatively equally. Since 2003, Scotland has been among the OECD countries with the most equal scores in the sense of the relatively narrow distribution of mathematics achievements, and that spread was very similar in 2012 as it had been in 2003.

The spread of achievement by socio-economic background in Scotland is narrower than in the OECD as a whole. A third of disadvantaged students (32%) were identified as "resilient" in 2012, meaning those from the bottom quarter of the distribution of socio-economic status who perform in the top quarter of performance in all countries. This is higher than the average across OECD countries.

Girls do better than boys in reading and boys do better than girls in mathematics and science. In 2012, boys were an average 27 PISA points below girls in reading but this is markedly less than the 38-point gap in OECD countries as a whole. The size of the gender gaps for low-performers is also below the overall OECD average.

Scottish schools are inclusive

Scottish schools are highly inclusive as shown through an international index of social inclusion of the degree to which students of different socio-economic backgrounds attend the same school. Scotland belongs to a small group of inclusive countries on this measure along with Finland, Norway and Sweden.

Internationally, students with immigrant backgrounds tend to be more disadvantaged and under-perform in education whereas immigrant students in Scotland achieve at higher levels than their non-immigrant peers. Scotland enjoys one of the smallest proportions of low performers among its immigrant students: only 16% compared with the much higher OECD average of 36%.

Students of Asian origin, especially Asian Chinese, obtained higher tariff scores in S4 and are more likely to be in a positive follow-up destination than white Scottish students but Asian-Pakistani, black Caribbean and African pupils perform at levels below other ethnic groups.

Internationally, students in rural areas achieve less well than urban students. In Scotland, on the other hand, students attending rural schools on average score higher

(have better tariff scores) in S4 than their peers of similar social backgrounds in towns and cities. In recent years, however, these differences have narrowed gradually.

Higher attainment, higher positive destinations

The proportion of students achieving 5 awards at level 5 of the Scottish Credit and Qualifications Framework stood at 39% in 2012/13, and has increased modestly but continuously since 2004. The attainment of students from deprived areas has increased at a steeper rate than for all students.

Over 9 in 10 of school leavers were identified as having found a positive follow-up destination in March 2014, with nearly two-thirds of school leavers (63%) going into higher or further education. The upward trend in positive destinations has been continuous in recent years.

Levels of positive destinations vary across local authorities, with the highest rates in 2013/14 in Eilean Siar, Shetland Islands, East Dunbartonshire and East Renfrewshire at more than 95% of school leavers. This compares with less than 90% in Dundee City, West Dunbartonshire, Clackmannanshire and Glasgow City. However, such disparities have reduced markedly since 2007.

Positive attitudes and connections

Scottish students hold relatively positive attitudes towards schools and what it has given them compared with their peers across OECD countries as a whole. Around 8 out of 10 students said they did not agree that school had done little to prepare them for life (well above the OECD average), and more than 9 in 10 did not agree that school had been a waste of time.

At least three in four Scottish students surveyed answered positively when asked whether they get along with their teachers, whether teachers take students seriously, and whether teachers are a source of support. More held positive perceptions of teacher-student relationships in 2012 than in 2003.

Young people in Scotland report high life satisfaction. Most Scottish adolescents (87%) said that they were highly satisfied with their lives, this being largely stable since 2002.

School and risk behaviour improving in Scotland

The proportion of 15-year-olds who reported drinking alcohol on a weekly basis dropped sharply from 43% in 2002 to 14% in 2014. Nearly a quarter of Scottish 15-year-olds were smokers in 2002 but this had dropped to 14% in 2014. Over two-thirds of Scottish teenagers judge that their school provides them with advice and support regarding smoking, alcohol consumption and drug use.

Staff assessments of behaviour in Scottish schools have been high since the mid-2000s, with low-level and serious disruptive behaviour both considered to be in decline. Even so, unauthorised absenteeism is above the OECD average in Scotland.

Problematic developments in Scotland

Not all the findings can be described as positive. *Education Scotland* inspection reports, for instance, gave as many as one in five schools only a “satisfactory” evaluation in inspections, and a smaller but non-trivial share (6% of early learning centres and 10%

of schools) are judged to be offering only weak or unsatisfactory provision. As many as a third of schools are therefore judged to be performing only just at or even below acceptable standards of provision.

Declining relative and absolute achievement levels

Scotland in 2012 was very similar to the international average in mathematics but that was after having been one of the leading countries in maths achievement just after the turn of the millennium.

Trends since 2003 in mathematics show a growing proportion of low achievers in Scotland and a shrinking proportion of high achievers. Scotland has gone from being among the countries with the lowest share below the Level 2 threshold to being only slightly better than the OECD average.

Scotland's performance in reading also dropped sharply between 2003 and 2006, and in 2012 was still 10 points down on 2003. Performance in reading using SSLN data also showed a decline between 2012 and 2014. SSLN shows that performance in numeracy declined between 2011 and 2013. The achievement gap between the least and most deprived also increased in the SSLN for some stages between 2011 and 2013 for both numeracy and reading.

SSLN data show that in S2, a higher proportion of girls is not yet working within the level in maths compared with boys and that girls' numeracy achievement dropped between 2011 and 2013.

Particular challenges confronting secondary schools

Enjoyment of school decreases with age which is a common international finding: in 2014, 37% of 11-year-olds reported that they liked school a lot but only 12% of 15-year-olds did. Scottish adolescents are less likely to report liking school than students in many countries.

Over two-thirds of primary school pupils (P4 and P7) perform well or very well in SSLN compared with the expected level in numeracy. But only around 40% of students in S2 perform at these high standards. This is in part because the level being assessed covers three years: S1 – S3. And, while less than 3% of the primary pupils were at the lowest level of performance, this proportion was considerably higher in S2 at nearly a third (30%).

In both numeracy and reading, the gap between achievement of students from areas of high and low deprivation widens as pupils and students advance, especially in numeracy.

Since 2003, the reported sense of belonging has dropped in Scotland and more adolescents report feeling left out of things. Perceived teacher support is also substantially lower among secondary school students compared with primary school pupils.

There is a common international gender gap in levels of engagement, drive, self-belief and motivation to learn mathematics: girls are more prone to low self-confidence to learn mathematics than boys even at similar achievement levels, and suffer higher levels of maths anxiety. Scotland is no exception to this pattern.

Recommendations

Be rigorous about the gaps to be closed and relentlessly pursue “closing the gap” and “raising the bar” simultaneously

As there are many gaps to be addressed, there needs to be clarity about which ones are policy priorities and the evidence needed to show whether they are closing or widening. Having identified the evidence needed, policy and data agencies and the research community should be closely engaged in monitoring change. The tangibility of a measurable gap to be reduced helps to focus especially on inequalities of opportunity between one area and another. With the dual emphasis on quality and equity, however, the aim will often be to raise the bar and close the gap simultaneously; one critical challenge for policy in doing so is that gaps do not actually become exacerbated as standards and expectations for all get raised.

Ensure a consolidated and evidence-informed strategic approach to equity policies

The array of frameworks, guidance, policies and interventions to tackle poverty and its impact on child outcomes is impressive, addressing the needs of many disadvantaged students and communities. With so many measures in place, the review team suggests the value of ensuring that synergies are made and strategic threads developed so that their total effect is more than the sum of the individual parts. It is important to ensure as well that, with so many different programmes and initiatives, they are both efficient and effective. For this, a developed evidence base, drawing on the results of evaluation and research, is essential.

Develop metrics that do justice to the full range of CfE capacities informing a bold understanding of quality and equity

Unless a range of metrics is available that reflects the full ambition of CfE, the nature of quality and equity always risks being reduced to the most readily measurable. Rising attainment measures in terms of qualifications and retention may be regarded as much the reflection of a well-functioning education system as of rising knowledge, skills and capabilities. Direct measures and assessments are therefore needed, especially of but not restricted to the four capacities: Successful learners, Confident individuals, Responsible citizens, and Effective contributors. With the dual emphasis on quality and equity, now might be an opportune time to reconsider the name of CfE (“Curriculum for Excellence and Equity”?).

Notes

- 1 In this chapter, we refer only to changes or differences that are statistically significant with a 95% confidence level.
- 2 The Health Behaviour in School-Aged Children (HBSC) Study is a key source of information on child and adolescent health. It began in 1983 and it now collects data in 44 countries and regions in Europe and North America every four years. The first Scottish HBSC survey was conducted in 1990. The HBSC target population is young people attending school, aged 11, 13 and 15 years (Currie et al., 2012).
- 3 Cross-country comparisons use the HBSC 2009 report because at the time of writing the 2014 international report was not yet available. The comparator countries except New Zealand participated in the 2009 and 2014 HBSC surveys.
- 4 “Resilient” students are those in the bottom quarter of a country’s distribution of socio-economic status who perform in the top quarter of performance in all countries, after accounting for socio-economic status (OECD, 2013a).
- 5 If the socio-economic profile of the school is above (below) the mean socio-economic status of the country, then the school is classified as an advantaged (disadvantaged) school. If the school profile was not statistically significantly different than the mean socio-economic status of the country, the school is classified as a socio-economically average school (OECD, 2013a).
- 6 PISA defines schools located in a city as those in locations with more than 100 000 inhabitants; schools located in towns as those in locations with 3 000 to 100 000 inhabitants; and schools located in a rural area as those in locations with fewer than 3 000 inhabitants.
- 7 Depending on date of birth, some Scottish students will not be able to leave school in Christmas in S5.
- 8 *Skills Development Scotland* gathers information on the primary activity of each school leaver on two occasions: 1) initial destination: three months after leaving school (in September following the end of the academic year), and 2) follow up destination: nine months after leaving school (in the following March).
- 9 The SALSUS is a national survey that started in 1982, collecting data on 13- and 15-year-olds every four years since then. The latest survey in this series took place in 2013.
- 10 Data presented here comes from latest round of the *Behaviour in Scottish Schools* study, previous rounds were conducted in 2009 and 2006. It consists of a series of in-depth interviews with local authority representatives, head teachers, teachers, support staff and students (Scottish Government, 2012b).
- 11 The early comparison period (baseline) includes schools inspected between 2008 and 2012. The first post-baseline sample includes schools inspected between 2011 and 2014 (with variations in timing between secondary, primary and secondary schools). The sample includes schools inspected since January 2014.
- 12 The SSLN reports three deprivation categories: the least deprived 30% of datazones, the middle 40% and the most deprived 30%. These are based on the Scottish Index of Multiple Deprivation (SIMD) 2012. Students are assigned to a category according to their home postcode (SSLN 2013 and 2014).

- 13 The average tariff score is an overall measure of educational attainment to compare post-16 qualifications which can be used as entry requirements to higher education. Each qualification attained by a student is awarded tariff points based on its SCQF level and credit points. Points are also based on the grade of award achieved. Note that tariff scores will be replaced with a new measure once all the new qualifications are introduced.
- 14 HM Inspection reports use the Scottish Index of Multiple Deprivation to classify schools: “deprived schools” are those with the majority of students living in the 15% most deprived data zones, (Scottish Government , 2012c).
- 15 Although the number of immigrants has increased markedly in Scotland, the proportion of ethnic minorities is relatively small. For instance, Asian Chinese represent 0.5% of the student population; Black Caribbean (0.1%) and Africans (0.8%) (Scottish Government, 2015a).
- 16 The SSLN sample size is too small to be disaggregated to the local authority level. And, as each local authority has its own method of tracking and monitoring the performance of students from P1 to S3 (Chapter 5), this too limits the scope for using LA data for these comparisons.
- 17 The Scottish Index of Multiple Deprivation is a weighted sum of indicators in seven domains: income, employment, health, education, skills and training, housing, geographic access and crime. The Scottish Index of Multiple Deprivation is based on small areas known as datazones. Each datazone has on average 800 people living in it. They are population-based; hence, they can vary hugely in size), (Scottish Government, 2012c).

Annex 2.A1 Scottish equity initiatives

- Achieving Our Potential initiative: Scottish Government (2008), “*A Framework to tackle poverty and income inequality in Scotland*”, The Scottish Government www.gov.scot/Publications/2008/11/20103815/6 (accessed on 16 September 2015).
- Additional Support Needs, www.educationscotland.gov.uk/inclusionandequalities/additionalsupportforlearning/ (accessed on 23 September 2015).
- A national approach to anti-bullying, www.gov.scot/Publications/2010/11/12120420/0 (accessed on 17 September 2015).
- Being Cool in School*: A programme for emotional literacy and teaching pro-social behaviour, www.educationscotland.gov.uk/inclusionandequalities/relationshipsandbehaviour/approaches/coolinschool/index.asp (accessed on 18 September 2015).
- Better Eating, Better Learning, www.gov.scot/Publications/2014/03/1606 (accessed on 22 September 2015).
- Better Relationships, Better Learning, Better Behaviour 2013, www.educationscotland.gov.uk/resources/b/genericresource_tcm4751407.asp (accessed on 16 September 2015).
- “The Children and Young People (Scotland) Act 2014”, www.legislation.gov.uk/asp/2014/8/contents/enacted (accessed on 16 September 2015).
- Community learning and Development, www.educationscotland.gov.uk/communitylearninganddevelopment/about/ (accessed on 22 September 2015).
- Early Years initiative: Scottish Government (2008), *The Early Years Framework*, The Scottish Government, Edinburgh, www.gov.scot/resource/doc/257007/0076309.pdf (accessed on 16 September 2015).
- Equally Well initiative: Scottish Government (2008), *Report on the Ministerial Task Force on Health Inequalities*, the Scottish Government, Edinburgh, www.gov.scot/Publications/2008/06/25104032/0 (accessed on 16 September 2015).
- Food for Thought Fund, www.educationscotland.gov.uk/learningandteaching/curriculumareas/healthandwellbeing/supportmaterials/foodandhealth/educationfund/introduction.asp (accessed on 22 September 2015).
- Framework for Intervention/Staged Intervention, www.educationscotland.gov.uk/resources/f/genericresource_tcm4487312.asp (accessed on 17 September 2015).
- Free school meals, www.gov.scot/Topics/Education/Schools/HLivi/schoolmeals/FreeSchoolMeals (accessed on 22 September 2015).
- The Getting It Right for Every Child approach, www.gov.scot/Topics/People/Young-People/gettingitright (accessed on 16 September 2015).

- Glow: access to technologies taking account of differentiated learning opportunities, www.educationscotland.gov.uk/learningandteaching/approaches/ictineducation/glow/index.asp (accessed on 22 September 2015).
- “*Included, Engaged and Involved: attendance in Scottish schools*”: guidance for LAs, schools and learning centres on how to promote engagement, including those at risk of poor attendance, www.gov.scot/Publications/2007/12/05100056/0 (accessed on 22 September 2015).
- Insight, www.educationscotland.gov.uk/resources/i/insightbenchmarkingforexcellence.asp and www.gov.scot/Topics/Education/Schools/curriculum/seniorphasebenchmarking/ (accessed on 23 September 2015 and on 16 September 2015).
- The Literacy Hubs, www.gov.scot/Topics/Education/Schools/curriculum/ACE/Literacy3/LiteracyHubs (accessed on 22 September 2015).
- LGBT (LGBT Youth Scotland), <https://www.lgbtyouth.org.uk/> (accessed on 23 September 2015).
- Literacy Action Plan 2010, www.gov.scot/Publications/2010/10/27084039/0 (accessed on 22 September 2015).
- The *Motivated School* approach to develop student autonomy and self-motivation, www.educationscotland.gov.uk/inclusionandequalities/relationshipsandbehaviour/approaches/motivatedschool/what.asp (accessed on 17 September 2015).
- The National Numeracy Virtual Hub, www.educationscotland.gov.uk/resources/n/numeracyhub.asp (accessed on 23 September 2015).
- Nurturing schools and Nurture groups, www.educationscotland.gov.uk/inclusionandequalities/relationshipsandbehaviour/approaches/nurture/index.asp (accessed on 22 September 2015).
- POLAAR (The Primary One Literacy Assessment and Action Resource), www.educationscotland.gov.uk/resources/p/polaar/introduction.asp (accessed on 22 September 2015).
- “Read, Write, Count”, www.readwritecount.scot/ (accessed on 22 September 2015).
- Restorative approaches*: a framework to promote harmonious relationships and resolve conflict, www.educationscotland.gov.uk/inclusionandequalities/relationshipsandbehaviour/approaches/restorative/Index.asp (accessed on 18 September 2015). Scottish Parliament (2014).
- Scottish Government (2013), *Better Relationships, Better learning, Better Behaviour*, The Scottish Government, www.gov.scot/Publications/2013/03/7388 (accessed on 16 September 2015).
- The Solution-Oriented Approach, www.educationscotland.gov.uk/inclusionandequalities/relationshipsandbehaviour/approaches/solutionorientedapproach/what.asp (accessed on 17 September 2015).
- Scottish Funding Council, www.sfc.ac.uk/ (accessed on 23 September 2015).
- The Access to Education Fund, www.educationscotland.gov.uk/inclusionandequalities/accessstoeducation201516.asp (accessed on 23 September 2015).
- STEP (Scottish Traveller Education Programme), www.step.education.ed.ac.uk/ (accessed on 23 September 2015).

The Raising Attainment for All programme, www.gov.scot/Topics/Education/Schools/Raisingeducationalattainment/RAFA, (accessed on 23 September 2015).

“Play, Talk, Read”, playtalkread.scot/, (accessed on 24 September 2015).

Parentzone Scotland, www.educationscotland.gov.uk/parentzone/, (accessed on 24 September 2015).

“Engaging with Families”, www.educationscotland.gov.uk/learningandteaching/partnerships/engagingparents/index.asp (accessed on 24 September 2015).

Scottish Attainment Challenge, www.gov.scot/Topics/Education/Schools/Raisingeducationalattainment (accessed on 24 September 2015).

SIPP (School Improvement Partnership Programme), www.educationscotland.gov.uk/learningandteaching/partnerships/schoolimprovementpartnershipprogramme/intro.asp (accessed on 24 September 2015).

References

- Bradbury, B. et al. (2011), “Inequality during the early years: child outcomes and readiness to learn in Australia, Canada, the United Kingdom, and the United States”, *IZA Discussion Paper No. 6120*, Forschungsinstitut zur Zukunft der Arbeit (Institute for the Study of Labor), Bonn, Germany, retrieved Oct 8, 2015, from <http://ftp.iza.org/dp6120.pdf>.
- Bradshaw, P. (2011), *Growing Up in Scotland: Changes in Child Cognitive Ability in the Pre-School Years*, Scottish Government, Edinburgh.
- Currie C., et al. (2015), *HBSC 2014 Survey in Scotland National Report*, Child and Adolescent Health Research Unit (CAHRU), University of St Andrews.
- Education Scotland (2014) *Summary of Reference Quality Evaluations, June 2014*, www.educationscotland.gov.uk/Images/SummaryReferenceQualityIndicatorEvaluations020614_tcm4-831239.pdf
- Education Scotland (2012a), *Quality and Improvement in Scottish Education Trends in Inspection Findings*, www.educationscotland.gov.uk/Images/QISE_tcm4-722667.pdf.
- Education Scotland (2012b), *National Performance Framework Baseline Summary Results*, www.educationscotland.gov.uk/Images/QIRESI130612_tcm4-722669.pdf.
- Education Scotland, *Towards Solution Oriented Children's Services (TSOCS)* www.educationscotland.gov.uk/inclusionandequalities/relationshipsandbehaviour/approaches/solutionorientedapproach/tsocs.asp.
- Education Scotland, *Solution Oriented Schools (SOS) programme*, www.educationscotland.gov.uk/inclusionandequalities/relationshipsandbehaviour/approaches/solutionorientedapproach/sos.asp.%2
- Elsley, S. (2014), *Learning Lessons: Young People's Views on Poverty and Education in Scotland*, Save the Children and Scotland's Commissioner for Children and Young People, Edinburgh.
- Feinstein, L. (2003), “Inequality in the early cognitive development of British children in the 1970 cohort”, *Economica*, Vol.70, pp. 73–98.
- Garcia, E. (2015), *Inequalities at the Starting Gate: Cognitive and Non-cognitive Skills Gaps between 2010-2011 Kindergarten Classmates*. Economic Policy Institute www.epi.org/publication/inequalities-at-the-starting-gate-cognitive-and-noncognitive-gaps-in-the-2010-2011-kindergarten-class/ (accessed 8 October, 2015).
- Kautz, T., et al. (2014), “Fostering and measuring skills: improving cognitive and non-cognitive skills to promote lifetime success”, *OECD Education Working Papers*, No. 110, OECD Publishing, Paris <http://dx.doi.org/10.1787/5jxsr7vr78f7-en>.

- OECD (2015a), *Skills for Social Progress: The Power of Social and Emotional Skills*, OECD Skills Studies, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264226159-en>.
- OECD (2015b), *The ABC of Gender Equality in Education: Aptitude, Behaviour, Confidence*, PISA, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264229945-en>.
- OECD (2015c), *OECD Family Database*, OECD Publishing, Paris, www.oecd.org/social/family/database.htm.
- OECD (2015d), *Schooling Redesigned: Towards Innovative Learning Systems*, Educational Research and Innovation, OECD Publishing, Paris.
- OECD (2014a), PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science, PISA, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264208780-en>.
- OECD (2013a), *PISA 2012 Results: Excellence through Equity (Volume II): Giving Every Student the Chance to Succeed*, PISA, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264201132-en>.
- OECD (2013b), *PISA 2012 Results: Ready to Learn (Volume III): Students' Engagement, Drive and Self-Beliefs*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264201170-en>.
- OECD (2013c), *Innovative Learning Environments*, Educational Research and Innovation, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264203488-en>.
- OECD (2004), *Learning for Tomorrow's World: First Results from PISA 2003*, PISA, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264006416-en>.
- Parent Zone Scotland, www.educationscotland.gov.uk/parentzone/ (accessed 18 November 2015).
- Scottish Government (2015a), *Summary Statistics for Attainment, Leaver Destinations and Healthy Living, 2015*, Scottish Government.
- Scottish Government (2015b), *OECD-Scotland Education Policy Review: Country Background Report*, Scottish Government.
- Scottish Government (2015c), *Tackling Inequalities in the Early Years: Key messages from 10 years of the Growing Up in Scotland study*, Scottish Government, Edinburgh.
- Scottish Government (2015d), *Summary Statistics for Schools in Scotland, No.5, 2014 Edition*, Scottish Government, Edinburgh.
- Scottish Government (2014a), *Summary Statistics for Attainment, Leaver Destinations and Healthy Living, 2014*, Scottish Government, Edinburgh.
- Scottish Government (2014b), *Scottish Schools Adolescent Lifestyle and Substance Use Survey 2013*, Information Service (ISD Scotland), National Services Scotland and Ipsos MORI Scotland, www.isdscotland.org/Health-Topics/Public-Health/SALSUS/Latest-Report/.
- Scottish Government, (2014c), *Annual Report for the Child Poverty Strategy for Scotland 2014*, Scottish Government, Edinburgh, www.gov.scot/Publications/2014/08/5884.

- Scottish Government (2015d), *Scottish Survey of Literacy and Numeracy (SSLN) (Literacy) Report*, Scottish Government, www.gov.scot/Publications/2015/04/7639.
- Scottish Government (2014), *Scottish Survey of Literacy and Numeracy (SSLN) (Numeracy) Report*, The Scottish Government, Edinburgh, www.gov.scot/Publications/2014/04/5692.
- Scottish Government (2014), *Summary Statistics for Attainment, Leaver Destinations and Healthy Living, No.4: 2014 Edition*, The Scottish Government, Edinburgh, www.gov.scot/Publications/2014/06/9242.
- Scottish Government (2014e), *Attainment and Leaver Destinations Supplementary Data*, The Scottish Government, Edinburgh, www.gov.scot/Topics/Statistics/Browse/School-Education/Datasets
- Scottish Government (2013a), *Summary Statistics for Attainment, Leaver Destinations and Healthy Living, No. 3: 2013 Edition*, www.gov.scot/Publications/2013/06/7503/.
- Scottish Government (2013b), *Scottish Survey of Literacy and Numeracy (SSLN) (Literacy) Report*, The Scottish Government, Edinburgh, www.gov.scot/Publications/2013/04/8843/0.
- Scottish Government (2012a), *Scottish Survey of Literacy and Numeracy (SSLN) (Numeracy) Report*; The Scottish Government, Edinburgh, www.gov.scot/Publications/2012/03/5285/0.
- Scottish Government (2012b), *Behaviour in Scottish Schools 2012*; The Scottish Government Edinburgh, www.gov.scot/socialresearch.
- Scottish Government (2012c), *The Scottish Index of Multiple Deprivation 2012*, www.gov.scot/Topics/Statistics/SIMD/BackgroundMethodology (accessed 17 November, 2015)
- Sosu, E., and S. Ellis (2014), *Closing the Attainment Gap in Scottish Education*, The Joseph Rowntree Foundation, <https://www.jrf.org.uk/report/closing-attainment-gap-scottish-education>.
- Youth Scotland, (2011), *Amazing Things: A Guide to the Youth Awards in Scotland (Third edition)*, www.awardsnetwork.org/files/Amazing_Things_3rd_edition.pdf.

Chapter Three

Decision-making and governance for the “Curriculum for Excellence”

This chapter turns to the critical areas of decision-making and governance, and includes implementation of the Curriculum of Excellence. Having put such an enormous and embracing educational strategy in place over more than a decade, the questions of how that has been achieved and how it is being managed and led are clearly critical to its longer-term success. This is especially the case as it is a curriculum designed so that the key locus of design and implementation lies with schools, teachers, local communities (and authorities). The chapter begins by presenting the review team’s understanding of these processes and strategies. It then presents some key conclusions from international work on educational governance, especially carried out by OECD. On these bases, the chapter presents critical issues for the successful development and implementation of Curriculum for Excellence. This chapter also discusses the meaning of the Curriculum for Excellence as well as the wider policy and public understanding of CfE. It concludes with recommendations.

Implementation and governance of the *Curriculum for Excellence*

This section presents a brief summary of some of the key aspects of how *Curriculum for Excellence* has been implemented, and relevant decision-making arrangements. It extensively uses the OECD-Scotland Education Policy Review: Country Background Report, Scottish Government Background Report prepared by the Scottish Government for this review, supplemented by additional material.

An extended process of implementation

The broad outline of the implementation of *Curriculum for Excellence* at the system level was given in Chapter 1, including its origins in national debate early in the 21st century and the careful establishment of the consensus and the CfE building blocks after that. Table 3.1 summarises the main milestones as contained in the Background documentation. The *Curriculum for Excellence* was officially established in 2004, and the new framework published in 2006. A large set of guidance documents and resources was created working to a timetable to be implemented in schools from 2009. An additional implementation year was accorded in the face of a widely-held viewpoint among local authorities, schools and teachers (including teacher unions) that schools needed the extra time to prepare. There was also additional funding for extra teachers and additional in-service professional development days to facilitate implementation. The roll out in schools took place in school year 2010/2011.

There was thus a lengthy period of preparation from the publication of the new framework in 2006 to CfE becoming the curriculum in Scottish schools four years later. The new *Building the Curriculum* series published during this time included the replacement of the former 5-14 curriculum with CfE in 2008 (see Table 3.1)¹. The milestones indicated in Table 3.1 since 2010 show how much activity has been devoted to assessment and qualifications. Specific issues relating to assessment are discussed in Chapter 5. It is the area that raises among the greatest concerns for teachers at both primary and secondary levels [“the greatest tensions we encountered were in relation to assessment”, (Priestley and Minty, 2013: pp. 48-49)].

Many of the recent milestones in Table 3.1 relate to the qualifications of the senior cycle. Though strictly lying outside the purview of this review focused as it is on Broad General Education up to the end of S3, with CfE being an integrated 3-18 curriculum then what takes place at any particular phase has impacts and ramifications for the others. From the point of view of the students and parents we spoke to, the question of readiness to make the transition to the Senior Phase, with its rigours and qualifications, figure large in their priorities and concerns. The aims, ambitions and attainments relating to the senior phase figure prominently in the lives of students, teachers, parents, and all others involved in implementing CfE.

Indeed, the senior-level qualifications have tended to dominate the public, policy and professional discussion in the past 2-3 years. The Background Report identifies these as concerns about implementation which “...have mainly focused on the readiness of local authorities and schools to implement CfE to the original timescales, particularly in relation to key deliverables such as the roll-out of new qualifications” (Scottish Government, 2015a, 2015b).

Box 3.1 Development of *Curriculum for Excellence*: 2002-2016

2002	<ul style="list-style-type: none"> • Scottish Parliament’s Education, Culture and Sport Committee begins inquiry into the purposes of Scottish Education • National Debate on Education
2003	<ul style="list-style-type: none"> • Education, Culture and Sport Committee publishes report and Curriculum Review Group established.
2004	<ul style="list-style-type: none"> • A Curriculum for Excellence Review Group report sets out aims for education and principles of the curriculum • A Curriculum for Excellence: Ministerial response, Programme Board established
2005	<ul style="list-style-type: none"> • Groups established to review existing guidance
2006	<ul style="list-style-type: none"> • Progress and Proposals proposes a new curriculum framework. • Building the Curriculum 1: report
2007	<ul style="list-style-type: none"> • Building the Curriculum 2: Active Learning in the Early Years • Draft Experiences and Outcomes start to be published
2008	<ul style="list-style-type: none"> • Continuing release of Draft Experiences and Outcomes with some trialing. • Consultation on the next generation of national qualifications • Building the Curriculum 3: A Framework for Learning and Teaching, replaces existing guidance on 3–5 and 5–14 curricula, and secondary sector curriculum design.
2009	<ul style="list-style-type: none"> • All Experiences and Outcomes published • Announcement of new qualifications framework • Assessment in Curriculum for Excellence: Strategic vision, key principles • Building the Curriculum 4: skills for learning, skills for life and skills for work
2010	<ul style="list-style-type: none"> • Building the Curriculum 5 - Assessment Framework • All schools begin to deliver Curriculum for Excellence (August) • Certification of first Scottish Baccalaureates • Online national assessment resource launched
2011	<ul style="list-style-type: none"> • Draft documents for new qualifications from National 2 to 5 and Higher for feedback • Excellence group reports on the way forward for main subject groups.
2012	<ul style="list-style-type: none"> • Revised Access 1, qualifications renamed National 1, 2 and 3 from 2013/14 • Draft documents for new Advanced Higher qualifications for feedback • Final unit and course specifications published for new and revised qualifications • All P7 pupils developed a P7 profile • First course materials, unit assessment support materials and professional focus papers
2013	<ul style="list-style-type: none"> • Specimen question papers for National 5, further course materials, unit assessment support materials and professional focus papers; final unit and course specifications for Advanced Higher • All S3 pupils developed an S3 profile • Final certification of qualifications at Standard Grade
2014	<ul style="list-style-type: none"> • First certification of new/revised qualifications at National 1 to National 5 (SCQF levels 1 to 5)
2015	<ul style="list-style-type: none"> • Final certification of qualifications at Access 1 to 3 (SCQF levels 1-3), Intermediate 1 and 2 ((SCQF levels 4 and 5); existing Higher (SCQF level 6); and Advanced Higher (SCQF level 7); first certification of new Higher qualifications (SCQF level 6)
2016	<ul style="list-style-type: none"> • First certification of new Advanced Higher qualifications (SCQF level 7)

Source: Scottish Government (2015), *OECD-Scotland Education Policy Review: Country Background Report*, Scottish Government.

This led *Education Scotland* to carry out a “deep audit” in 2012 to ascertain from all 32 local authorities the readiness of secondary schools and in so doing was able to identify individual schools, departments and subjects where further support was required to ensure that staff and schools were ready to deliver the new qualifications. Hence, it may be asked how far the new qualifications have absorbed energy and attention from the other key components of the *Curriculum for Excellence*.

Yet, it should not be supposed that the prominence of implementing qualifications meant that other core work of curriculum development and providing resources and directions for its implementation did not continue. There has been intense activity to create a suite of support materials by *Education Scotland*, including the CfE briefings series published in 2012 and 2013 of which there are 16 to date². There has been a prominent drive to address excessive bureaucracy linked to the curricular and assessment demands of CfE. The “Tackling Bureaucracy Group” published an interim report in 2012 and final report (Scottish Government, 2013), with follow-up guidelines and research in 2014, and a further follow-up report in 2015, discussed later in this chapter (Scottish Government, 2015c). There have been on-going and extensive professional learning events organised throughout Scotland. And there has been intensive work undertaken within the management bodies closest to CfE.

That implementation has continued apace in addition to assessment and qualifications may be seen in two other fundamental sets of developments. First, there has been a set of related reforms and measures that may not necessarily be seen as strictly *Curriculum for Excellence*, but which have been fundamental to its achievement. Teacher education was subject to wide-ranging review spanning the whole teaching career resulting in the publication of the Donaldson report “Teaching Scotland’s Future” in 2011 (Donaldson, 2011). There has been a wholesale adoption of its recommendations; the General Teaching Council for Scotland (GTCS) revised its Professional Standards with effect from 2013 in “support of the creation of a reinvigorated approach to 21st century teacher professionalism” (GTCS, 2013).

At the same time, a second major report relating to employability and skills, the Wood Commission Report, was published in 2014 (Wood, 2014), and its 39 recommendations have been integrated into a new long-term strategy to reform the vocational education system. A National Parents Forum was established in 2011, in which Parents Councils across Scotland have nominated people to represent their local authority areas, and a new Scottish College for Educational Leadership still more recently in 2014. There are continued high profile strategies aimed at reducing the social gaps in educational attainment, particularly with the Scottish Attainment Challenge (see Chapter 2) and the New Draft National Improvement Framework for Scottish Education proposals published in September 2015 (Scottish Government, 2015b).

Second, and perhaps still more fundamental regarding implementation of the *Curriculum for Excellence* as it has deliberately shifted from being the prescriptive curriculum of the 1980s and 1990s is what has been happening in schools, communities and local authorities in the everyday work being done all over Scotland by teachers, leaders and learners. The story summarised above and in Box 3.1 is “implementation” in a programmatic sense, and in this regard the curriculum may even be viewed as already implemented. This is how it is expressed by the *Education Scotland* webpage explaining how CfE was developed: “The curriculum phase of the Curriculum for Excellence Programme has now been implemented. The Programme will continue until 2016 when the implementation of the new qualifications, which are being developed by SQA, is

completed”. Hence, the main task of implementation may now be seen crucially to rest nearer to the ground, albeit with the continuing support of the central bodies and agencies.

Governance and management of CfE

The development and management of the *Curriculum for Excellence* is overseen by the CfE Management Board. This, in line with the strong emphasis on consensus in Scottish education, has membership and representation from a wide range of key players and stakeholders. It includes representatives of Local Authorities, teacher and head teacher associations, national bodies (such as Education Scotland, Scottish Qualifications Authority and Skills Development Scotland), the National Parent Forum of Scotland (NFPF) and Colleges and Universities. It is chaired and supported by Scottish Government officials, and “has overall responsibility for the delivery of the national elements of CfE”. National expectations for implementation of CfE are set out each year with the expectation that schools and other providers will use the national guidance to support self-evaluation and use evidence from their self-evaluation to identify priorities for improvement.

A smaller CfE Implementation Group is drawn from within the membership of the Management Board, and was established in 2011. It brings together those with particular responsibility for the major aspects of delivery, and helps identify and address the issues arising. It is chaired by *Education Scotland*.

Education Scotland has produced extensive guidelines and documentary resources including the CfE briefings, the Building the Curriculum series, the “How Good is Your School?” series (now in its 4th edition), and the Experiences and Outcomes document (Chapter 1). As so much of CfE is about local and school-based development within national guidelines and frameworks, this is a key “gatekeeper” role. *Education Scotland* also offers tailored support, based on Local Authority partnership agreements and any emerging support issues at school, local or national level. Any school which does not receive a positive inspection report receives an *Education Scotland* tailored package of support.

The *Scottish Qualifications Authority* (SQA) has also undertaken a range of consultation activities throughout the development of the new CfE National Qualifications. This has been continued with over 300 continuing professional development events to support teachers and specific subject-oriented CPD events as well.

There are different boards and committees at the national level responsible for the different programmes or tasks closely connected to the CfE (Scottish Government, 2015a). Some of these are about developing the tools to provide or support student assessment (National Assessment Resource Strategic Steering Group; Scottish Survey of Literacy and Numeracy Project Management Board; Curriculum, Learning, Teaching, Assessment and Support [CLTAS] National Forums; Insight Project Board). Others are about programmes that affect CfE, schools and learning in important ways (Developing Young Workforce Programme Board; National Implementation Board [on teacher education]).

While the CfE framework is set nationally, decisions regarding the CfE as it is implemented rest with Local Authorities, their schools and teachers; they in turn are expected to consult with the wider community, parents and learners. Local authorities should offer clear policy guidance to their schools on how the curriculum is to be

delivered. The Association of Directors of Education in Scotland (ADES) convenes a curriculum, assessment and qualifications network (CAQ) of senior education officers that supports, coordinates and promotes delivery activity across all 32 local authorities, linking closely with national agencies. Head teachers are responsible for the day-to-day implementation, management and organisation of the curriculum, which they do with their management teams, staff and local communities.

There is a wide range of professional networks, working groups, conversations and conferences, which support practitioners and their partners and stakeholders in collaborative approaches to the development and implementation of CfE. These function within and between schools and establishments, at Local Authority level and inter-Authority level as well as at national level facilitated by *Education Scotland*, SQA and professional organisations. They involve different combinations of staff, for example, classroom practitioners, Local Authority officers, head teachers, subject principal teachers, parents, college and higher education and third sector organisations working together. These networks can involve staff focusing on provision on a sectoral basis, such as early education and childcare, primary, secondary and post school. They give the opportunity to provide updates and share information, engage in professional discussions and collaborate and share resources and good practice. They are also an important way to consult on policy and development of guidance, as well as being a way to agree key priorities for further support and development at school, Local Authority and national level.

Insights from OECD work on governance and related international examples

This section presents a series of insights from international work of relevant to governance, decision-making and reform. It draws especially on analysis generated by the OECD’s Centre for Educational Research and Innovation (CERI) and, within CERI, on “Governing Complex Education Systems” in particular (see Box 3.2).

These define key issues to be picked up in this chapter and those that follow: the importance of focusing on processes; the need to balance consensus-building with decisive action; balancing accountability needs with the promotion of trust; potential capacity weaknesses at all levels; the value of strategic vision and of developing key principles. This kind of international work does not propose as solutions out of context selected practices found in certain high-performing systems. Instead, it identifies fundamental issues that arise in very different countries, not unique to Scotland or any other system, with pointers to how a system might develop solutions appropriate to itself.

Governance in the contemporary context of complexity

The complexity of education systems reflects the complexity of the world in which they are located. We live in an era of information and data overload. Our societies are increasingly diverse, in their socio-demographics and in their values and identities. The sources of influence no longer neatly fit within geographical borders and are themselves increasingly diverse. Stakeholders are ever more vocal in their demands - for themselves, their children and for education in general – in part because they are better educated and informed. Globalisation continues to raise the bars of aspiration and ambition. Education is a field characterised by strong *a priori* beliefs, irrespective of extant research findings, yet policies and practices are increasingly expected to be at the least “evidence-informed”. The pressure on response times with technological and communications

advance means they are inexorably shortened, despite educational change requiring capacity and time (OECD, 2015a, 2006).

Box 3.2 Insights from OECD work on *Governing Complex Education Systems*

There is no one right system of governance. In principle, nearly all governance structures can be successful in education under the right conditions. While structures occupy much of the discussion about successful governance, it is more fruitful to focus on processes.

Effective modern governance is a balancing act. Systems must find a balance between accountability and trust, between innovation and risk-avoidance, and between consensus building and making difficult choices. Finding the right balance will depend on the context and history of the system, as well as the ambitions and expectations for its future.

Effective governance works through building capacity, open dialogue, and stakeholder involvement. However, it is not rudderless: involvement of a broader range of stakeholders only works when there is a strategic vision and set of processes to harness their ideas and input.

The national or state level remains very important in triggering and steering education reform, even in decentralised systems. It often provides the strategic vision needed to enable effective delivery of reform as well as equitable access and outcomes for students. It can also be instrumental in developing guidelines and goals, and providing feedback on the progress towards those goals.

There are systemic weaknesses in capacity throughout most educational systems which contribute to today’s governance challenges; these affect every level of the system.

There is a need to develop key principles for system governance - not just agreement on where to go, but *how to get there*.

Source: OECD (2015a, forthcoming), “Modern Governance in Education: the Challenge of Complexity.”

Complexity is increasingly recognised not as an excuse but as a fact, describing both the context and the nature of policy making: Traditional approaches, which often focus on questions of top-down versus bottom-up initiatives or levels of decentralisation, are too narrow to effectively address the rapidly evolving and sprawling ecosystems that are modern educational systems. (Snyder, 2013; p.6) This extends to be the very understanding of what is “the system”. Among other factors, the penetration of digital technologies and the reach of global connection, the entry of new learning providers; and the extent of networking mean that the “system” can no longer mean only arrangements within the formal institutions and relationships (OECD, 2015b).

The vertical, horizontal, and the “middle”

Contemporary governance can be seen to work around two organisational principles that are not straightforward to combine. First, a *vertical* ladder, from the minister downwards runs a hierarchy on which all can be placed; vertical accountability is similarly hierarchical (Roth and Wittich, 2013). Second, there is the *horizontal* logic involving networks and many different stakeholders in relationships without given positions of authority, in which accountability is about providing insight into educational processes, decision-making, implementation, and results. The horizontal may lack the clarity of vertical hierarchy but it is indispensable in a world of knowledge, connection and complexity.

With the complex nature of education, including the necessity to involve more stakeholders and to encourage professional collaboration and networking, the traditional mode of vertical governance by itself is insufficient (Hooze et al, 2012). It is thus helpful to think in terms of “multi-level governance” (e.g. Wilkoszewski and Sundby, 2014). Yet there always remains the question: “who retains the responsibility for oversight and steering?”, and the central level needs important steering capacity if national or international standards are to be monitored and met.

As top-down strategies are often inappropriate given the emphasis needed on professional and community action, yet with bottom-up strategies by themselves unable to achieve improvement at any significant scale, it is natural to focus strongly on the “middle” (Hargreaves and Ainscow, 2015). This may be the middle of the formal system organigram represented by districts, local authorities etc.; it may be the “meso” level combinations of the networks, chains, professional communities, initiatives, and groupings that are often invisible in the official charts of an education system. The “middle” may thus also be defined vertically and horizontally; we argue in this report that it needs to include both.

But not all local-level bodies are equally strong and indeed a common problem is their widely varying capacity. So, it is not enough simply to emphasise the middle compared with central agencies or schools but there needs to be collaboration in the middle sharing resources, ideas, and expertise and exercising collective responsibility for their students’ success (Hargreaves and Ainscow, 2015). The OECD’s latest analysis of innovative learning systems stresses a flourishing, dynamic “meso” level as the means to system transformation, in this case emphasising the horizontal dimension (OECD 2015b). The collaboration in the middle is both between local authorities and engaging schools and stakeholders through various forms of networking.

Theisens proposes “governance through networks” to address the shortcomings of central planning, on the one hand, and decentralised, fragmented school-level autonomy and marketisation, on the other (OECD 2015a, forthcoming). He maintains in his framework a strong central steering and enabling role, so providing the overall framework in which the networks function. He applies the jazz improvisation metaphor (Boutelier, 2011): behind the seeming disorder are the conditions to be met for successful improvisation: competence and proficiency; strong groups and practice (rehearsal); leadership; and enthusiasm. All are relevant to educational governance, especially when a key role is played by professional and local action and design as in the *Curriculum for Excellence*.

Policy learning and knowledge as a key medium of governance

It fits with this characterisation of contemporary educational governance that it is knowledge intensive, the effectiveness of which depends critically on the ability to learn. In complex, often fragmented systems, sharing knowledge is essential, for example, to communicate and share innovative practices. In addition, the different types of testing and assessment – local, national and international - have led to an explosion in the evidence available to decision-makers at all levels, putting a premium on the capacity to understand what they mean. Knowledge systems combine descriptive system data (on achievement, graduation, etc.) with research findings informing whether something is working and why (or not); they include tacit knowledge transmitted informally (Fazekas and Burns, 2012). Knowledge and learning are also essential in negotiations and dialogue which are integral to collaborative progress in complex systems, and enable those at the

micro and meso levels to participate in nationwide strategy, using high quality knowledge to improve the quality of decision-making and practices.

Large and growing volumes of data are becoming available through assessment and monitoring systems, indicators of effectiveness, targets, inspections, and review programmes. Although designed to increase transparency and accountability, they can also function to disrupt this process or simply not work as intended. Appropriate use of data for decision-making requires local officers, leaders, educators and others to become highly competent to interpret and use such information. It requires a governance structure that allows for proper data circulation and collection and incentivises its use. The capacity to handle data, especially in local government and schools, is often over-looked and methods for accessing, analysing and interpreting information are not self-evident (OECD, 2015a forthcoming; see also Earl and Timperley, 2015).

Complexity in conflicting time lines

In a world of new technologies and instant feedback, with education in the glare of media attention, expectations are for rapid results; this is only likely to accelerate. This runs up against the fact that school reforms often take a long time to embed, which has been shown to be especially the case (and pertinent to Scotland’s *Curriculum for Excellence*) when those reforms require a different philosophical approach to teaching or changes in the governance structure of schools (OECD, 2015d, Chapter 9). Reform timelines can also be at odds with the needs of the elected official, who has two or three years to make his/her case for re-election and demonstrate the efficacy of any flagship reforms. Time, then, is another element of complexity (OECD, 2015 forthcoming).

If embedding takes time, as professionals learn what is required, design for it, adjust and even radically change arrangements and create new partnerships and networks, any premature evaluation will give only disappointing results. Indeed, it is a familiar phenomenon that the initial disruption of the innovation may, once the initial rush of enthusiasm has passed, actually result in a decline in measured results and attainments in the first instance before it embeds and the benefits emerge. While it may not be possible to control expectations and the inevitable tensions between shorter- and longer-term demands, it is important to design evaluations with appropriate time frames. And there is the difference between when the evaluation data are gathered (from the outset) and when it is appropriate to analyse and publish.

Priorities for CfE governance and decision-making

Putting together current arrangements for governance and decision-making around the CfE and key insights emerging from international analysis provides the basis for our identification of areas that we feel need to be addressed if the full promise of *Curriculum for Excellence* is to be realised. Inevitably, we are in a position to elaborate more the “What” and “Why” rather than the detail of the “How”.

Implementation “at a watershed”

A number of voices heard during the review meetings, including some who have been very close to *Curriculum for Excellence* and its development, expressed an important judgement that we felt needed to be taken very seriously: “*this is a watershed moment for CfE*”. To the extent it is true, it enforces still more the wisdom of conducting an

international review in 2015. But what does it mean? We had three potential interpretations.

First, the “watershed” may be a statement of fact reflecting the position summarised by *Education Scotland* on its website that: “The curriculum phase of the Curriculum for Excellence Programme has now been implemented”. It is a watershed as over a decade of intensive work has put the main pieces in place, raising now the question “what and where next?” This is watershed as “key transition point” with the completion of a long-running implementation period and the beginning of a new phase.

Second, the notion of “watershed” may reflect a positive judgement about the different foundations that have been put down and finally ready to bear fruit. Essential long-term complementary building blocks especially around teacher education and leadership have been put in place. The long gestation has been needed so that all the different communities and professionals become familiar and expert. The new qualifications have arguably absorbed a great deal of the system’s energy but now, it could be said, the energy can be directed at unleashing the full CfE potential. This is “watershed” in the sense of “take-off point”.

Third, there is “watershed” as an expression of the concern that an accumulation of criticisms and a febrile political environment might yet rock the *Curriculum for Excellence* despite its longevity. Concerns over achievement levels, as discussed in the previous chapter, might add to rumblings over the senior phase qualifications. The tightening expenditure situation bites ever more deeply in central and local authority budgets and will, as we heard, continue to do so. So, a third interpretation of watershed is more alarmist if it means “make or break moment”.

Is there now a critical moment now in the protracted history of CfE that might push it forward as a leading example of a 21st century curriculum? Or might it prove a juncture that makes further progress difficult and the early expectations unlikely to be realised? We think that all three versions should be taken seriously, though in our view the CfE is now so well anchored in the system that it would not readily be undone. And, to the extent that the first is addressed – what and where next? – and the second is recognised, this would significantly diminish the chances of the third leading to “break” rather than “make”.

In our view, this juncture calls for a degree of boldness that we have sought to reflect in our recommendations. Even if we do not believe that the *Curriculum for Excellence* project is in any immediate danger of unravelling, a negative scenario is imaginable without bold positive measures. A context of criticism and cuts could lead to micro management from the centre and growing tension between government and councils. It could lead to a public and political debate that misses many of the most important pillars and achievements of CfE. All this would likely unnerve teachers, with negative impact on morale and on the carefully-built union consensus. We think it is important to avoid this negative scenario.

Reinforcing the “middle”

Scotland has moved a long way to introducing the building blocks of a new curriculum but there is the question of how far it has been able to match that by shifting the core assumptions of the system, with its hierarchies and culture. Inherent in the principle of CfE is enhancement of the role that should be exercised by schools and teachers. At the same time, a centralised form of system management is in place; up until

now without strong corresponding central accountability pressures and national assessments were abolished as part of the reforms that paved the way for the introduction of CfE early in the new millennium (though at the time of writing and of preparing the review major new proposals are being considered to reintroduce national assessments as part of a National Improvement Framework).

Some assess that Scotland has a strongly centralist system, the intention of the CfE notwithstanding (e.g. “Traditions of consensus and central leadership present powerful impediments to the new approach”, Donaldson, 2014: 183). It is a considerable challenge to alter deep-seated cultural beliefs and traditions. Given the centrality of schools, teachers and communities in the design of *Curriculum for Excellence*, it might be tempting to argue in these circumstances for considerably more autonomy for schools in a relatively straightforward process of “decentralisation” (see Centre for Scottish Public Policy, 2013). Many reforms are driven by the idea that control, direction and delivery should come from the centre alongside individual freedom and autonomy for school-level decision-making. As we argued earlier in this chapter, we find this duality unconvincing, focusing on the extremes while ignoring the “middle” and neglecting horizontal as well as vertical relationships.

The power and leadership of school leaders, teachers and the profession does indeed need to be enhanced and consonant with the expectation that CfE will, in a real sense, be school- and teacher-led. But, we do not think that can be achieved just by augmenting school autonomy in the sense of giving greater freedom to individual school communities and head teachers untrammelled by engagement with others.

We have also been struck by the fact of the formal power of the local authorities (LA) at the heart of the Scottish system – all the provision relevant to this review is the responsibility of local authorities, as described in Chapter 1 – and yet they do not feature as prominently as we had expected in system documents and governance arrangements. Their representative voices are apparent in national bodies, through COSLA (Convention of Scottish Local Authorities) and ADES (Association of Directors of Education), but as one among several. There strikes us to be a mismatch between formal responsibilities and system leadership.

We believe that to be in the spirit of CfE, recognising the formal linchpin position of the LAs, calls for the *collective autonomy* of schools to be enhanced, working together under district (LA) control, and of districts working together within the wider system, to generate and drive change.

What might this look like in practice? Here are two examples, one taken from Ontario, Canada, the other from Victoria, Australia. They are only examples, and they cannot and should not simply be borrowed in Scotland. Rather, they help to illustrate what “strengthening the middle” can mean while maintaining the centrality of school and teacher collective professional leadership. In the Ontario example (Box 3.3), the focus was specifically on special needs driven by school district officers. As pointed out in the box, it makes the argument for collective rather than individual professional autonomy as a force for change. What makes it especially powerful is that it engaged all 72 boards in horizontal networking, thereby making for system-wide change but driven from the middle not the top.

The Western Metropolitan Region in Victoria, Australia is one of nine regions within Victoria with around 140 schools altogether. It is therefore somewhat smaller than Glasgow, the largest of Scotland’s Local Authorities, but larger than many LAs in

Scotland. It shares with Glasgow high levels of deprivation, and the background to the WMR reform was consistently poor educational attainment and achievement. It occupied the unenviable position at the bottom of most indicators of learning and achievement. It was from this low starting point – the “burning platform” of much reform and innovation – that the strategy was forged (Suggett, 2013).

Box 3.3 “Leading for All”, Ontario, Canada

Ontario’s school board leaders and superintendents have been the dynamos behind the province’s special education strategy, generating the forces that have given it momentum and energy. This influential group of highly respected middle-level school system administrators did not just deliver but also developed much of the reform strategy that included processes of coaching, mentoring, cross-pollination and communication of key ideas.

The capacity and agency of this group was made possible, in large part, by a resourcing strategy of equal funding that incentivised participation by all 72 boards, especially the many smaller ones. This built a critical mass of political and professional capital among directors and superintendents of education, acting as an influential and well-networked province-wide community. Their impact and success point to the power of collective rather than individual professional autonomy as a force for positive educational change.

Source: Hargreaves, A., and H. Braun. (2011), Leading for all: A research report of the development, design, implementation and impact of Ontario’s “Essential for Some, Good for All” initiative.

Of note for this discussion is how it needed system leadership for the whole region yet without ending up being top-down. Schools are its key players and co-designers. What is especially relevant to this chapter is how it was built around networking and clustering within the region, establishing seven networks of approximately 20 schools each as the key unit through which to drive the changes. This is not the chapter to discuss this as a strategy for addressing chronic under-achievement and under-performance (which it did) but to offer one illustration of what reinforcing the “middle” can mean, while maintaining the locus of action and change firmly in schools, teaching, learning and communities rather than simply shifting the locus of power up or down the rungs of a hierarchical system.

We should acknowledge, however, that if the LAs are given a more prominent role, together with the collegiate activity of schools, networks and communities, as part of a reinforced “middle”, then it is necessary to address the variation between them in terms of capacity and expertise. Otherwise, such a move might serve to exacerbate the inequalities that were already noted in Chapter 2. Far from “closing the gap” it might widen it further.

This can be primarily addressed, in line with Hargreaves and Ainscow (2015), through reinforcing the mutual support and learning across LAs, together with schools and networks of schools. This would fit naturally the Scottish tradition of consensus-building. However, the risk of widening the gap between local authority areas in making them more central to system leadership in CfE, as some surge ahead with their new-found responsibilities and opportunities and others fail to grasp them with the same verve, is too great simply to leave to chance. The differences in the activities and performance of LAs – suggested by our review in Chapter 2 and as revealed through the inspections generated by *Education Scotland* and the new Draft National Improvement Framework – may need

to be a priority for government to tackle so that an overall strategy of strengthening the “middle” does not bring greater inequity in its wake (Scottish Government, 2015b).

Box 3.4 Western Metropolitan Region (WMR) Reform, Victoria (Australia)

The WMR reform was a systemic intervention strategy, designed to galvanise a collective effort to lift performance. The strategy aimed to improve the learning outcomes and wellbeing of all government school students in the region (including those performing well) by developing the instructional knowledge and practices of teachers, school leaders, and regional staff. The focus was on literacy and numeracy as the “building blocks for access to a rich curriculum and successful transition pathways”, and was subsequently extended to others areas of the curriculum.

The region had divided its schools into seven networks, each comprised around twenty schools and those schools and the associated regional support infrastructure were the organisational centre points for the region’s strategy. The approach to system-wide improvement was generated through “co-design” and mutual commitment between the region and all schools. This process enabled the region and its schools to establish powerful overarching goals, a common language, and an interlocking set of mutual expectations and actions. They chose a proven instructional model for literacy and numeracy improvement that had an excellent track record through which expert consultants and coaches could continuously build teacher capacity. That methodology was extended to other areas of the curriculum as the strategy progressed.

Four principles guided the improvement strategy: a) *Collective efficacy* – this occurs when teachers collectively believe all students can learn and achieve. It is a lead indicator of the potential for growth in student learning. b) *Focus on the “instructional core”* – the only place to improve student outcomes is in the classroom; that requires focussing on the relationships between student, teacher and content. c) *Layered learning* – this is about continuous capacity building that emphasises that everyone learns together about the same things. d) *Gradual release of responsibility* – this is a theory of learning that moves the learner from teacher-directed instruction to student-centred collaboration and independent practice. It is applicable to all learning including students in the classroom and professional learning for teachers and principals.

These principles were underpinned by “de-privatised” classrooms; where professional practices are developed and refined through openness and collaboration. The strategy progressed through four broad interlocking stages.

- Setting the challenge and building the shared purpose.
- Early implementation; establishing role clarity and tight webs of reciprocal responsibilities.
- Relentless implementation: changing what schools do, particularly instruction for literacy and numeracy.
- Emerging collective efficacy: flourishing innovation and network learning.

Source: Suggett, D. (2013), “School improvement at scale - A Victorian success story”, [Report submitted by the Department of Education and Early Childhood Development (DEECD), Victoria, Australia to the OECD “Innovative Learning Environments” Project, www.oecd.org/edu/cei/AUS.VIC.SystemNote.pdf (accessed 8 October 2015).

Rethinking CfE governance

As outlined in the first section of this chapter, the CfE Management Board, comprising a wide range of representative stakeholders in Scottish education, occupies a central position in directing *Curriculum for Excellence*. This arrangement has been well fitted to the task of implementing CfE as a Scotland-wide curriculum programme. That task required consensus and managing processes so that implementation, including of assessment and qualifications, would happen as smoothly as possible. We heard from a senior official during our meeting with the CfE Management Board that their meetings had changed over recent years - from a strong focus on strategy towards discussing and managing processes, and that it now meets less frequently.

Returning to our above characterisation of CfE as being at a “watershed” in the first sense - as a “key transition point” with the completion of a long-running implementation period and the beginning of a new phase – and given our position about significantly reinforcing the “middle” in the drive to realise CfE’s full potential as a curriculum being made by schools and communities, we suggest that the role and composition of the Management Board be reviewed, indeed changed.

In line with our understanding of CfE, we see the value of shifting the focus from “running” CfE with a management board ironing out details as they arise, to a body focused directly on the nature of teaching, learning and the curriculum in schools, networks and communities. It might have special remits to identify outstanding practices that should be adopted Scotland-wide, including network practice and processes for building curricula; how to narrow the achievement gap through innovating learning environments; and identifying priorities for the knowledge base (provided by research and the improvement agency). It could oversee the simplification and clarification processes suggested in the next section.

While being all-Scotland in reach, we would see it corresponding closely to the new “middle”. Without specifying precisely who might belong to it, we would see it reshaped so that it is essentially about professional leadership. This would shift the balance between LAs, networks and schools, on the one hand, and a broad range of stakeholder representative bodies, on the other. It might have the status more of a *forum* aiming at growth, coherence and making connections, rather than a *board* managing a programme.

Other potential groupings that might be considered, though mindful not to add to the total number of boards, committees and working groups, might be:

- A small CfE strategy group at the top and heart of Scottish Government to bolster strategic leadership (not ‘management’). A starting point for its work for the coming 2-3 years could be realisation of the recommendations of this review.
- A research consortium especially around creating the conditions in schools and classrooms to raise achievement among the least advantaged students, bringing together Scottish university research centres, Education Scotland as a research body, Scottish Government research, representatives of research units in local government and in teacher unions, the learned societies (e.g. RSE ([Royal Society of Edinburgh](#))) and possibly one or two invited international members.
- If changes to the Management Board might leave some stakeholders feeling less engaged in CfE than before, consideration might be given to creating a major public stakeholder forum linked possibly to, say, the Scottish Learning Festival.

Overcoming bureaucracy

That bureaucracy is sufficiently problematic that a high-level group was established led by a minister is revealing of how CfE has been implemented in ways that do not align with the original intentions of an essentially uncluttered, professional curriculum. An elaborate process was set in train with its own Working Group (“Tackling Bureaucracy”) led by a minister and with eleven different body representatives, producing an interim report in 2012 and a final report in 2013. This was followed by extensive activity in 2014. *Education Scotland*, ADES and SQA worked together, doing professional development programmes and producing a further guidance document in 2014 (Scottish Government, 2014).

In parallel, consultancy research was commissioned looking at practice in schools and local authorities in five LAs and reporting towards the end of 2014 (Blake Stevenson Ltd., 2014), leading to a further report in 2015 (Scottish Government, 2013, 2015). Despite several years of working groups and exhortation to improve, the research still found: an “overwhelming perception” that there is “too much guidance and not enough time to look at it” and many reported that they found the *Education Scotland* and SQA websites hard to navigate. Problems seem especially to arise at the secondary level where “there is generally a weakness around current systems for the collection and recording of information throughout the BGE.” (Blake Stevenson Ltd, 2014: Executive Summary: v); there is “the widespread view in secondary schools that SQA has made excessive demands in relation to assessments and verification”.

There is acknowledgement in the “Tackling Bureaucracy” drive, confirmed by soundings in the field, that this is a real problem. Given the ambition that CfE should be built in schools, local communities and networks of educators, reducing bureaucracy has rightly been identified as a priority as otherwise it can suffocate the bold collaboration and innovation on which CfE depends for its success. We suppose, however, that we are not the first to note the irony of addressing the problem of excessive bureaucracy through a process that itself is striking in being bureaucratic and centralised. It would thus be contradictory to add any additional items to the 18 action points already identified in 2013. Instead, we suggest focusing especially on those that are about simplifying the *system* rather than to assume that problems lie as much with overly-complicated interpretations by the many schools, teachers, communities and local authorities. We would caution against addressing the problem identified in the 2014 research of “too much guidance and not enough time to look at it” through drafting extensive new guidance.

Hence, we would suggest simplifying the simplification process by focusing especially on the small number of action points identified in 2013 that call for system change at the centre and then to be very transparent about what has been achieved, including through possible high-visibility ministerial campaigns to get this message across. We would therefore underline in particular the 2013 action points that address, respectively: CfE and *Education Scotland*, inspections, SQA, and overall guidance. These are:

- Review the CfE website to ensure that national policy expectations are clear and guidelines and support for CfE are made more easily accessible.
- Clarify expectations about inspections, making sure that the documentation required for inspection purposes are kept to a minimum.

- Ensure that national and local quality assurance processes are aligned and proportionate.
- Regularly review guidance to highlight current advice and remove unnecessary and out-of-date material.

The first of these points promises to be a substantial undertaking. The library of resources and guidelines available on CfE is extensive and complicated. It is about streamlining and clarifying what is really essential with users such as head teachers and other school managers, class teachers, community educators, parents, students and local authorities.

This will need in the process to address potential areas of confusion. For instance, is it clear to schools how to put together in straightforward ways a curriculum that is prominently about four capacities, on the one hand, and the extensive Experiences and Outcomes, on the other? There is a serious viewpoint in Scotland that these are fundamentally incompatible (“...a hybridisation of different, incompatible curriculum planning models”, Biesta and Priestley, 2013: 38; see also Priestley and Humes, 2010). However that is answered as regards curriculum theory, combining the two in practice ought to be a matter that is easily grasped and readily put into practice in all school communities, including by students and parents, as well as school leadership and teachers. If it is not, it argues for a fundamental process of clarification.

The above action points also pinpoint the expectations and practice regarding inspections and assessments, and again we see the onus for simplification and clarity to lie with the main responsible system agencies. How successful *Education Scotland*, SQA and the 32 Local authorities are in responding to these action points might then be matters for the CfE Board or even ministerial oversight. These should be kept in constant review, and the fourth action point above in any event suggests that this will be an on-going task, not something to be resolved once-and-for-all.

Bold action at the system-level to simplify and clarify might then be prominently included in the narrative that we are proposing next.

Developing a new narrative

Implicit in our suggestions regarding bureaucracy is the value of clear and visible leadership (in distinction to on-going management), both in communicating the simplifications and in following up to ensure the drive has been successful. We would extend this further to CfE as a whole and to the over-arching education strategy in which CfE plays a leading part. Within that we focus here especially on the value of developing and deploying a convincing and strong narrative.

This arises especially because of the “watershed” situation we discussed earlier in this chapter. With watershed as “key transition point”, after a long-running implementation period and its corollary of an emerging new phase, a strong fresh narrative would powerfully help to galvanise activity and enthusiasm. With watershed as “take-off point”, a strong narrative is the ideal catalyst. With watershed as “make or break moment” a strong narrative is similarly valuable to strengthen the cause of make and to reduce any risk of break.

A narrative is succinct enough that it is clear and memorable but more developed than a set of bullet point messages. It should be very clear on what *Curriculum for Excellence* is and why it is so important. It incorporates a theory of change, a trajectory of how CfE

achieves its ambitions and how it contributes to the wider changes that make it so important. Rather than being only a narrative of desired changes, it will be more powerful the more it is grounded in CfE achievements to date – the successes that are intended to be further extended in the upcoming future. The narrative can and should be revised as new pertinent evidence becomes available, such as that emerging from the proposed National Improvement Framework (NIF) (Scottish Government, 2015b). Vice versa, the narrative might importantly influence that NIF framework in the future.

We think such a fresh narrative is also needed because an emerging rationale we heard on several occasions during our review visit is essentially negative, defined not so much in terms of what CfE is and ought to be but instead what it is not: i.e. CfE is not about league tables and is not a market-oriented approach (often associated with England). Scotland, we think, needs a positive narrative in this context rather than one cast around avoidance of what are perceived to be unpleasant alternatives.

There is a further important reason why we suggest the development of a new narrative and it concerns how shared is the understanding in Scotland of what CfE actually is. On several occasions we were told, with these words or their equivalent: “*Curriculum for Excellence* is something of a misnomer”. This is another simple phrase that warrants closer interrogation. One meaning is that CfE is much more than a curriculum programme but an umbrella for a wide-ranging long-term strategic approach to education. Another is that the strong emphasis on *excellence* should not be misheard as to imply the neglect of *equity*. It was not clear to us that *Curriculum for Excellence* was being used in the same way by those to whom we spoke; for some, it sounded like the broad umbrella under which belong a whole package of policies, for others, it referred specifically to curricular, and related assessment and pedagogical issues, corresponding to the final section of Chapter 1 of this report.

At first sight, such elasticity may be viewed as welcome flexibility but we would question this positive interpretation. In our view, it blurs the task of building positive forward momentum while laying CfE open to criticisms that arguably should be directed at other aspects of the system or policy. Developing a clear narrative is difficult so long as CfE is a moveable feast. There is also the adequacy of a name – “Curriculum for Excellence” – that seasoned observers choose to introduce to visiting reviewers as a “misnomer”.

For these diverse reasons, we would suggest reconsideration of the scope of CfE and would argue against a widely-embracing and elastic interpretation. It might be that two narratives are needed: one on *Curriculum for Excellence*, and one on all the policy strategies for curriculum, teachers and leadership, qualifications, quality assurance, and equity which would make it clear how CfE is a “jewel in the crown” but not the entire crown. (The title of the Scottish Learning Festival 2014, “Raising Achievement and Attainment for All”, for instance, might be sufficiently embracing and would avoid the epithet “misnomer”.) Being clear that *Curriculum for Excellence* is specifically what is being made by schools, teachers and local communities, based on important guidance material developed especially by Education Scotland and SQA, and not a wider set of policies about teachers or equity that relate to it, would, we believe, also serve to bolster professional confidence and engagement in CfE.

Creating a new narrative is, of course, not for us to do. We do see it as best produced by and associated with the Scottish Government, as an integral part of its visioning and strategy leadership. We see it as a political document rather than “owned” by the central agencies or the profession (though its widespread acceptance and adoption would make it

the more effective). We see that as part of maintaining an equilibrium in balancing through central direction the school-led nature of CfE and a strengthened “middle”, as we have proposed.

The CfE theory of change

Extending our reflections beyond a new narrative it is worthwhile also to consider the *theory of change* underpinning the implementation of CfE. Such a “theory” is the explicit connection between goals and the means adopted – how the strategy is expected to lead to the desired results. A theory of change is often not made explicit, especially when relationships are consultative and emergent, rather than formalised, or in order to avoid exposing disagreement. But without it, the pathway from adopted strategy to desired outcomes may well leave untouched too many ingrained “taken-for-granted” practices.

We summarise here our perception of the current underlying CfE theory of change. It is necessarily an over-simplification but is not intended to be distortion or caricature. Critiquing our perception and extending it might well be a fruitful way to uncover underlying assumptions and to develop new ones for the next era of *Curriculum for Excellence* ahead.

- Consensus is essential for reform and change in Scotland, and this is nowhere better illustrated than by CfE. The motivation of professionals at all levels provides a sound platform and that needs a policy culture of positive encouragement.
- CfE has been largely introduced already – the curriculum programme by 2014 and the qualifications programme by 2016, which means the major task is to identify implementation issues and respond to them.
- A key element of this is to ensure that adequate support and professional development are organised.
- These points may be summed up as management and diffusion. Representative consultation and management works through the CfE Management Board, which also serves as a means of diffusion to stakeholder groups through their representatives.
- Education Scotland is the linchpin organisation in serving two key functions. First, it has lead responsibility for preparing the guideline documents and resources through which schools and communities design and implement their own curricula. Second, the inspection service is able to monitor directly how samples of schools are rising to the CfE challenge, and occasionally will conduct deeper LA audits.
- Coordination with a variety of other organisations and programmes [SQA, Developing Young Workforce, the National Implementation Board (on teachers and teacher education), the Scottish Leadership Academy, GTCS and others] is essential to achieve system alignment and coherence.
- Networks are flourishing in Scotland, and their encouragement is about growing and sharing knowledge and practice as an important means through which learning about policy and practice, and innovation, takes place.

There is much that is positive in this theory of change, especially in its pursuit of consensus and support for professional and policy learning. Yet, we wonder whether it is yet bold enough, and whether it breaks sufficiently with a system management tradition in recognition of a new dynamic to be generated nearer to teaching and learning. We

wonder whether it is more a theory of continuity than of change. As with the narrative, our value as an external review is to propose the development of the theory of change rather than to propose what should be in it. Ultimately, it is the theory driving the different stakeholders in Scotland around the shared project of realising the *Curriculum for Excellence* that counts.

More horizontal, less zero-sum

An essentially vertical understanding of educational decision-making within a clearly-demarcated institutional school system goes hand-in-hand with a zero-sum understanding of power and autonomy. On this understanding, there is a fixed amount of power and decision-making autonomy spread from the minister at the top to the school classroom at the bottom; this would mean that the more that power and autonomy is accumulated at one level, the less is available for the others.

We have argued the need to combine the vertical and horizontal, and our recommendations do not accept the zero-sum understanding of power and autonomy. In fact, our recommendations amount to extending greater powers to *all* levels simultaneously. This would be achieved by shifts in focus, by creating a new professional understanding of the locus of CfE implementation with accompanying revised management arrangements, while rejecting a zero-sum interpretation of “autonomy” as the freedom to make decisions untrammelled by the involvement of others. Our vision is of collective responsibility and multi-layer governance.

- The strategic leadership of the *Scottish government* would be reinforced, as would its visibility through a new narrative for CfE. This would be closely linked to the new National Improvement Framework.
- A *central agency* or agencies to have strengthened responsibilities in key areas, while perhaps diminished leadership in others:
 - A clear *all-Scotland data provision role* (presaged by the National Improvement Framework and discussed in more detail in Chapter 5), complementing the strong professional knowledge already shared with LAs and schools.
 - The comprehensive task of *streamlining the main resource and guidance documentation*, to simplify assessment and curriculum design at the local level.
 - Inspection, with particular responsibility to *review progress in each local authority and their schools towards CfE*, which *inter alia* would address inequalities between the different LAs.
- So long as the *local authorities* are the main providers, our recommendations would recognise them as the engine room of innovation and reform together with schools and local communities, within the main guidelines set by government leadership.
 - They would have a very prominent role in a reframed CfE Board/Forum.
 - They would be prominent in the reinforced “leadership from the middle”, orchestrating networks and clusters with schools and local authorities.

Summary of key points

- The thrust of the chapter has been to strengthen collective autonomy of schools and their local communities, recognising the role that CfE has always accorded to them in principle. They would be prominent in system leadership at the “middle” in networking arrangements with LAs and other local stakeholders.
- There has been an extensive period of implementation of the CfE over the past decade including reforms of qualifications, as well as a set of related reforms in areas such as teacher education and equity. With programmatic implementation coming to completion, CfE may be described as “at a watershed”, which makes this review particularly timely.
- *Curriculum for Excellence* is overseen by the CfE Management Board: it is consensus-oriented and has membership and representation from a wide range of key players and stakeholders. *Education Scotland* has produced extensive guidelines and documentary resources and occupies a key “gatekeeper” role for CfE as well as inspecting schools inter alia on how well they are building CfE.
- Given that CfE is essentially designed to be school- and teacher-led, we believe that there needs to be a shift in emphasis from central management towards local implementation. We see this best achieved through reinforcing the “middle” with local authorities a key part of that.
- We see the value of shifting the focus from “running” CfE with a management board ironing out details as they arise, to a body focused directly on the nature of teaching, learning and the curriculum in schools, networks and communities.
- Addressing bureaucracy has rightly been a high priority. We would suggest simplifying the simplification process by focusing especially on system change at the centre – making guidelines and expectations clearer and more easily accessible and simplifying the demands of inspections and assessment - and then to be very transparent about what has been achieved.
- *Curriculum for Excellence* is sometimes referred to as the broad umbrella under which belong a whole package of policies whereas for others, it refers specifically to curricular, and related assessment and pedagogical issues. We think this elasticity blurs the task of building positive forward momentum. We would focus on CfE as the curriculum, assessment and related pedagogical framework.
- We suggest the need for a new strong narrative to be developed for CfE. It should be very clear on what *Curriculum for Excellence* is and why it is so important and it should incorporate a theory of change. It will be more powerful the more it is grounded in CfE achievements to date and be revised as new pertinent evidence becomes available.

Recommendations

The discussion in review of the CfE decision-making and governance arrangements has illustrated several of the conclusions emerging from related OECD work, particularly on “Governing Complex Education Systems” (Box 3.2). The need for balance referred to in Box 3.2 between accountability and trust, for instance, and between consensus and decisive action in making the difficult choices. Trust and consensus are invaluable

resources and take significant time to establish but they need also to be tempered with professional accountability, system-wide evidence and system leadership. Chapter 5 reinforces the need for a robust evidence base for policy and practice. The importance of stakeholder capacity has been stressed, especially in schools, communities, and the “middle” and yet also the key role of the centre in providing strategic vision and enabling the feedback on how well the goals are being achieved.

Create a new narrative for the “Curriculum for Excellence”

We recommend creating a new narrative for CfE and to make it highly visible in Scotland. This would restate longstanding aims but it would also incorporate any shifting emphasis and a trajectory of how CfE will achieve its ambitions. It should be built as far as possible on evidence about the achievements of CfE and new evidence should be absorbed into the narrative as it becomes available. In turn, such a narrative can be used to help shape the evidence agenda related to CfE effectiveness and equity, and the new National Improvement Framework. CfE in the narrative should focus on the core matters of curriculum, assessment and pedagogy, and avoid the elasticity whereby it may expand to refer to all related strategies. We envisage narrative development to be an act of political leadership, then to be picked up and incorporated into the management of the system, and absorbed by the profession, schools, communities, parents, students, and the public at large.

Strengthen the professional leadership of CfE and the “middle”

Having implemented CfE at the system level, the centre of gravity needs to shift towards schools, communities, networks of schools, and local authorities in a framework of professional leadership and collective responsibility. This means less emphasis on “running” CfE as implementation and consensus-building at the system level towards professional leadership focused directly on the nature of teaching, learning and the curriculum in schools, networks and communities. This might best be realised through a new *forum* aiming at growth, coherence and making connections, rather than a *board* managing the programme from the centre. We believe in reinforcing the “middle”, through fostering the mutual support and learning across LAs, together with schools and networks of schools. If the LAs are given a more prominent role as part of a reinforced “middle”, together with the collegiate activity of schools, networks and communities, then their varied capacity and expertise will need to be addressed through processes of professional accountability.

Simplify and clarify core guidance, including in the definitions of what constitutes the “Curriculum for Excellence”

Given the ambition that CfE should be built in schools, local communities and networks of educators, it is important to reduce the bureaucracy that can stymie the bold collaboration and innovation on which CfE depends for its success. If the demands made by CfE, qualifications and assessments are not well understood or procedures are too laborious, it is the system that needs to be clarified, not giving users coping strategies or more detailed roadmaps through complex documentation. It will call for strengthening core concepts, clarifying and simplifying system requirements, and making information more readily available. It means making system-wide policy expectations and guidelines more easily accessible, including for inspections; ensuring that national and local quality assurance processes are aligned and proportionate; and regularly reviewing guidance to highlight current advice and remove unnecessary and out-of-date material. Students,

parents and local communities should be seen as the beneficiaries of the clarification and simplification process as much as the professionals in the education system.

Notes

- 1 Building the Curriculum 1: The contribution of curriculum areas; Building the Curriculum 2: Active learning in the early years; Building the Curriculum 3: A framework for learning and teaching; Building the Curriculum 4: Skills for learning, life and work; Building the Curriculum 5: A framework for assessment.
- 2 *CfE Briefing 16*: Religious Observance (2014); *CfE Briefing 15*: Sciences for all (2013); *CfE Briefing 14*: Curriculum for Excellence - Political Literacy; *CfE Briefing 13*: Planning for Learning part 3 - Individualised educational programmes (IEPs); *CfE Briefing 12*: Planning for Learning part 2: Further learning, training and employment beyond age 16; *CfE Briefing 11*: Planning for Learning part 1: Through the Broad General Education ; *CfE Briefing 10*: The role of Community Learning and Development and partnership working; *CfE Briefing 9*: Learning about Scotland (all 2013); *CfE Briefings 8, 7 and 6*: Progression from the Broad General Education to the Senior Phase parts 3, 2 and 1 (2013 and 2012); *CfE Briefing 5*: Personalised Learning; *CfE Briefing 4*: Interdisciplinary Learning; *CfE Briefing 3*: Profiling and the S3 Profile; *CfE Briefing 2*: Assessing Progress and Achievement in the 3-15 Broad General Education; *CfE Briefing 1*: Broad General Education in the Secondary School – A Guide for Parents and Carers (all 2012).

References

- Audit Scotland (2014), *School Education Report*, Accounts Commission, www.audit-scotland.gov.uk/docs/local/2014/nr_140619_school_education.pdf.
- Berliner, P.F. (1994), *Thinking in Jazz: The Art of Improvisation*, University of Chicago Press, Chicago and London.
- Biesta, G., and M. Priestley (2013), “Capacities and the curriculum” in M. Priestley and G. Biesta (eds.) *Reinventing the Curriculum: New Trends in Curriculum Policy and Practice*, Bloomsbury, London.
- Blake Stevenson Ltd. (2014), *Tackling Bureaucracy, Executive Summary for the Curriculum for Excellence Working Group on Tackling Bureaucracy*, Education Scotland, on behalf of the Curriculum for Excellence Working Group on Tackling Bureaucracy, Edinburgh; www.educationscotland.gov.uk/Images/TBExecSummaryReport_tcm4-855157.pdf.
- Boutellier, H. (2011), *De Improvisatiemaatschappij, Over De Sociale Ordening Van Een Onbegrensde Wereld*, (The Improvisation Society, Creating Social Order in a Borderless World) Boom Lemma Uitgevers.
- Donaldson, G. (2014), “Teacher education and curriculum change in Scotland”, *European Journal of Education*, Vol.49/2, pp. 178-191.
- Donaldson, G. (2011), *Teaching Scotland’s Future: Report of a Review of Teacher Education in Scotland*, Scottish Government, Edinburgh.
- Earl, L., and H. Timperley, (2015), “Evaluative thinking for successful educational innovation”, *OECD Education Working Papers*, No.122, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5jrxtkljtdwf-en>.
- Fazekas, M., and T. Burns, (2012), “Exploring the Complex Interaction between Governance and Knowledge in Education”, *OECD Education Working Papers*, No. 67, OECD Publishing. <http://dx.doi.org/10.1787/5k9flcx2l340-en>.
- GTCS (2013), “About the Standards” *General Teaching Council for Scotland*, www.gtcs.org.uk/standards/about-the-standards.aspx#revised-standards (accessed 8 October 2015).
- Hargreaves, A., and H. Braun (2011) *Leading for All: A research report of the development, design, implementation and impact of Ontario’s “Essential for Some, Good for All” initiative*, Boston College and the Code Special Education Project.
- Hargreaves, A. and M. Ainscow (2015), The top and bottom of leadership and change, *Phi Delta Kappan*, November 2015 Vol. 97/3, pp. 42–48, <http://dx.doi.org/10.1177/0031721715614828>.
- OECD (2015a, forthcoming) *Modern Governance in Education: The Challenge of Complexity*, Educational Research and Innovation, OECD Publishing, Paris.

- OECD (2015b), *Schooling Redesigned: Towards Innovative Learning Systems*, Educational Research and Innovation, OECD Publishing, Paris.
- OECD (2015c), *Education Policy Outlook 2015: Making Reforms Happen*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264225442-en>.
- OECD (2006), *Demand-Sensitive Schooling?: Evidence and Issues*, Schooling for Tomorrow, OECD Publishing Paris, <http://dx.doi.org/10.1787/9789264028418-en>.
- Priestley, M. and S. Minty, (2013), “Curriculum for excellence; ‘a brilliant idea but...’”, *Scottish Educational Review*, Vol. 4/1, pp. 39-52.
- Priestley, M. and W. Humes, (2010), “The development of Scotland’s Curriculum for Excellence: amnesia and déjà vu”, *Oxford Review of Education*, Vol. 36, pp.345-361.
- Reform Scotland and the Centre for Scottish Public Policy (2013), *By Diverse Means: Improving Scottish Education*, Final Report of the Commission on School Reform.
- Roth, G. and C. Wittich (2013), *Max Weber, Economy and Society*, University of California Press.
- Scottish Government (2015a), *OECD- Scotland Education Policy Review: Country Background Report*, Scottish Government, Edinburgh.
- Scottish Government (2015b), *A Draft National Improvement Framework for Scottish Education* September, Scottish Government, Edinburgh, www.gov.scot/Publications/2015/09/7802 (accessed 8 October 2015)
- Scottish Government (2015c), *Curriculum for Excellence Working Group on Tackling Bureaucracy Follow-Up Report*, Scottish Government, Edinburgh.
- Scottish Government (2013), *Curriculum for Excellence Working Group on Tackling Bureaucracy, First Report*. Scottish Government, Edinburgh, www.gov.scot/Resource/0043/00438622.pdf (accessed 8 October 2015).
- Education Scotland (2014), *The revised national guidance on Professional review and Development*, Education Scotland, www.educationscotland.gov.uk/Images/PRDJan14_tcm4-825877.pdf.
- Snyder, S. (2013), “the simple, the complicated, and the complex: educational reform through the lens of complexity theory”, *OECD Education Working Papers*, No. 96, OECD Publishing. <http://dx.doi.org/10.1787/5k3txnpt1lnr-en>
- Suggett, D. (2013), “School improvement at scale - A Victorian success story”, [Report submitted by the Department of Education and Early Childhood Development (DEECD), Victoria, Australia to the OECD “Innovative Learning Environments” Project, www.oecd.org/edu/cei/AUS.VIC.SystemNote.pdf (accessed 8 October 2015).
- Theisens, H. (2015), “Education governance: hierarchies, networks and improvisation”, in OECD 2015a forthcoming (Chapter 3).
- Wilkoszewski, H. and E. Sundby (2014), “Steering from the centre: new modes of governance in multi-level education systems”, *OECD Education Working Papers*, No. 109, OECD Publishing. <http://dx.doi.org/10.1787/5jxswcfs4s5g-en>.
- Wood, I. (2014) *Education Working For All! Final Report*, Commission for Developing Scotland's Young Workforce, www.gov.scot/Publications/2014/06/4089.

Chapter Four

Schooling, teachers and leadership

This chapter shifts towards the heart of schooling. This is to recognise that reframing bodies and advice at the centre will mean little if that does not impact on the teaching and learning in schools and communities. What is presented is not an authoritative summary of practice in Scotland but a set of issues and insights gained from our visits and research and informed by international examples and analysis. The key issues discussed are: dimensions of reform, teaching and learning, teachers and professional capital, and leaders and leadership. This chapter is especially important given the high ambition of the Curriculum for Excellence (CfE) to be built by professionals and communities in schools, networks and districts all over Scotland.

The dimensions of reform

Curriculum for Excellence is driven by considerations of achieving educational quality and equity, on the one hand (the Excellence part), and by a particular vision of the kinds of learning that Scottish children should be experiencing, on the other (the Curriculum part). This section picks up the themes raised in Chapter 3 and reviews this double emphasis by examining:

- The distinctiveness and clarity of the vision for CfE;
- The strategy for and characteristics of implementation;
- The impact on teaching and learning in schools.

Like other large-scale reform strategies, CfE can be positioned on two dimensions. First, how *bold are its aims and purposes* in terms of providing breadth and depth of educational experiences and outcomes *versus* focusing on particular achievement priorities in areas such as literacy and numeracy? Second, how *precise is its specification*: is it general in what it specifies to be learned and how it monitors progress and success, or does it use specific metrics to assess implementation? It is possible to locate large-scale reforms on the matrix in Figure 4.1 and we use this to illuminate CfE.

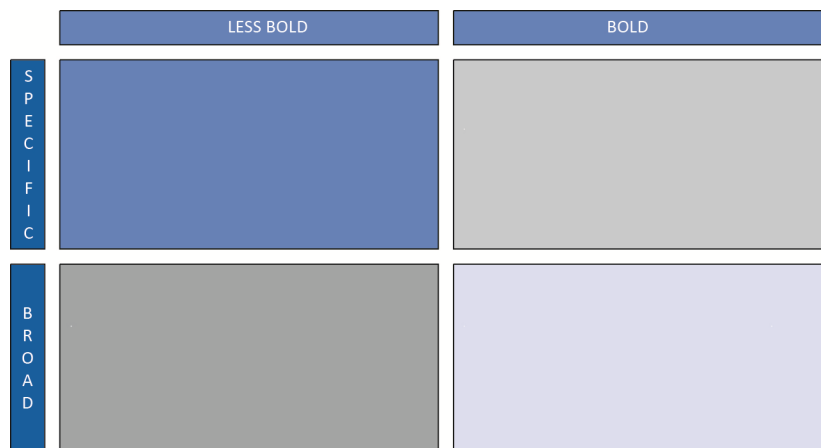
This exercise highlights that it is not sufficient to locate educational reform initiatives and overall system performance on a single continuum that extends from “poor” to “proficient” to “good” to “great”, tempting though this device may be. Just as OECD consistently stresses that equity is as important as performance standards as an indicator of system outcomes, the same applies to the overall direction of a reform, and its progress towards that chosen direction. The nature and ambition of a system’s goals and purposes are important as well as the success in accomplishing them.

Three quadrants in Figure 4.1 are of particular relevance to this review (other than the bottom left combination). First, in the late 1990s and early 2000s, many concerted system-wide reform and improvement efforts occupied the top left-hand quadrant, concentrating on raising the bar in making measurable improvements in literacy and numeracy, on narrowing gaps in these areas between students from more and less advantaged circumstances, and on improving examination performance and graduation rates among secondary school students.

These reform efforts have been hotly debated but there is a broad consensus on three issues. First, in this top left-hand quadrant, higher and more authentic achievement gains have occurred when the push for improvement has been matched by high levels of professional respect and support and by a non-punitive approach to accountability. Examples of these more successful strategies include New York District 2 in the 1990s and Ontario in the first decade of this century (Elmore and Burney, 1997; Campbell, Lieberman and Yashkina, 2014). Second, when literacy and numeracy reforms have been addressed together, results in literacy have proved to be more sustainable than those in mathematics. [A recent *Education Scotland* study underlined success particularly in leadership in literacy, and how this can be linked to improvements in performance and the quality of learners’ experiences, (Education Scotland, 2015).] The simultaneous pursuit of reform in both areas has tended to result either in neglect of the one at the expense of the other, or in disillusionment and subsequent problems due to the excessive workload involved encompassing almost all the affected curriculum (Hargreaves, 2014). Third, the intensive focus on literacy and numeracy has tended to side-line other important areas of

learning such as science, history and geography, physical and health education, the arts, citizenship, and a wide range of what are now termed 21st century skills.

Figure 4.1 The axes of school reforms



For Scotland, while the top left-hand quadrant may seem attractive in promising to secure measurable progress towards equity and excellence in particular curriculum areas, it risks narrowing the curriculum through concentrating on “basic” skills at the expense of other valued areas of learning, and it can incur problems of declining attractiveness of teaching due to work overload and decreased autonomy.

In a complex, fast-changing and diverse global economy, some of the systems that were in the top left-hand quadrant are now moving laterally towards the top right in bolder educational directions. Singapore, for example, was one of the world’s most tested educational systems in the 1990s with a centralised, content-based curriculum. It decided to reduce the number of high-stakes testing points to just one (at age 11) before secondary school examinations at age 16 so that its more broadly-defined curriculum would give greater professional discretion to teachers and provide a “test of life” rather than a “life of tests” for its students (OECD, 2011a; Hargreaves and Shirley, 2012). In the same spirit, Ontario has also shifted its strategy in a bolder direction through its 2014 vision document, *Achieving Excellence* that rests on the four pillars of excellence, equity, wellbeing, and public confidence.

So, some systems that were successful in securing measurable improvements in specific, “basic” areas of learning are embracing a bolder vision of learning and achievement, without losing the capacity to track, monitor and prompt progress in the newly-prioritised areas.

The bottom right quadrant is also relevant to CfE, characterised by bolder visions for education and students’ learning, though less specific in measuring how well these goals are being accomplished. This quadrant contains some distinguished educational traditions: education that concentrates on the “whole-child” or on development of the whole person in a lifelong-learning process; the project method of the United States in the 1920s; the arts-infused curriculum of Robert Owen’s New Lanark industrial community in the 1800s; the “progressive” approach of English primary schools in the 1960s and 1970s; and, more latterly, the movement towards 21st century skills such as effective communication, cooperation, global awareness and digital competence. These traditions

assign high importance to project- and problem-based learning, interdisciplinary study and a curriculum that has balance and breadth.

A bolder, broader curriculum extending beyond the basics of literacy and numeracy has characterised many systems including in the Nordic countries, Australia and New Zealand, and most Canadian provinces. In the quest to drive measurable progress and accountability, some of them like Denmark, the Netherlands and New Zealand are showing tendencies to move towards the top left: defining specific improvement goals and targets largely in relation to traditional measures of literacy and mathematics performance.

Scotland's *Curriculum for Excellence* in many ways epitomises the bottom right hand quadrant. As outlined in Chapter 1, CfE centres on four capacities of what it means to be a Scottish learner and citizen: *successful learners*, *confident individuals*, *responsible citizens*, and *effective contributors*. The capacities are expressed in experiences and outcomes of learning in curriculum areas that are realised differently at different stages of schooling. A high value is placed on interdisciplinary project-based learning and also on out-of-school as well as within-school learning experiences. Key questions for CfE concern:

- How and how effectively is CfE being implemented?
- What do teaching and learning look like on the ground?
- What is the evidence of progress, impact and success?
- Is the teaching force being sufficiently prepared, guided and supported to implement CfE effectively?
- What strategies for leadership development are being used and planned to support teachers effectively in teaching this bold and ambitious curriculum?

Taking these questions together, and bearing in mind the extent of progress as well as direction of travel, which quadrant will or should Scotland move towards next? Should it be bold and specific, or less bold and specific? Should it remain where it is? In conducting our review, we came to the view that the distinctive strength of CfE for Scottish young people, for the nation's educators, and as a reform model for the world, resides in the boldness of its learning goals and the belief in a high quality education profession that can deliver them successfully. But, new and improved ways need to be devised for tracking and monitoring progress toward those important goals, and for demonstrating their impact to the public. These issues of how to remain bold and also become more precise will be explored in the remaining three sections on teaching and learning, developing the professional capital of the teaching force, and investing in appropriate leadership.

Teaching and learning

However visionary any curriculum is in principle, this makes little difference unless there is successful implementation in practice. Many of the boldest and most visionary curriculum designs have failed in practice. Either the reforms have not spread beyond a few innovative schools and their enthusiastic and highly-skilled staff (Fullan, 2001) or curricula have been so badly implemented that the practice has borne only superficial fidelity to the philosophy (Gross et al, 1971; Anderson, 2009). In the historic movements of educational reform, evidence of poor implementation rarely leads to redoubled efforts

to improve such implementation. Instead, there is a tendency to go towards the opposite: project methods are followed by cults of efficiency (Callahan, 1962), outcomes-based learning is succeeded by high stakes testing (Hargreaves et al, 2000), and a broad but inconsistently interpreted curriculum gives way to a prescriptive and more basic one. In Scotland, as elsewhere, it is important to be wary of this tendency.

Implementing CfE in schools, teaching and learning

There is widespread agreement among education professionals about the inspirational value and rigorous content of the official curriculum of the *Curriculum for Excellence*. The key question for CfE, as for other curriculum and assessment frameworks, is whether and how far this value has been realised in practice.

Oversight for the implementation of CfE is invested in the Management Board for CfE and its Implementation Group, representing the different partners within Scottish education (see Chapter 3). The *Curriculum for Excellence*, Board members explained, arose as a response to an excessively “centralised” and “overloaded” system, and represented a move towards professional judgments instead of external target-setting. It had been deliberately developed in a sustainable way so that it would not run ahead of the capacity of education professionals to deliver it. The commitment to a sustainable rather than a hastily-introduced reform is widely supported by the different educational partners.

For evidence of implementation, the Management Board referred to sources of quantitative evidence such as an *Education Scotland* survey which was reported to show that 90% of students are enjoying their learning. In addition to their own professional judgments, Board members indicated that they rely heavily on the inspection reports produced by *Education Scotland* and these contribute to the Board’s own annual reviews of implementation.

Scotland’s inspection functions are also improvement processes – similar to the Netherlands and Norway, but unlike England. *Education Scotland* leaders indicated that “90% of inspections have seen improvement in experiences in terms of confidence, engagement, staying on in school and national qualifications”. The inspection process is one way that knowledge is circulated around the system. Inspections lead to consequences and support, especially in the case of schools with weaknesses. In general, instead of exerting a top-down accountability function, the inspection system looks for and responds to the “signals” in the system by constantly moving around it – with some parallels to the systemic improvement process in Finland (albeit done there without a formal inspection agency) (Hargreaves, Halasz and Pont, 2008). *Education Scotland*’s executives believe it is “continually listening, very agile, [and] able to respond very flexibly”. It reports on selected themes over time and exemplifies good practices on its website. Overall, the system does make use of some quantitative evidence but within a context of strong respect for its own professional judgments and also the judgments of teachers, leaders of schools, and local authorities.

The Board and other bodies we met as a review team such as *Education Scotland*, and the Association of Directors of Education (ADES), continue to be passionately committed to CfE. In the words of one member, it had led to “a transformation of children’s experience”. System leaders of most organisations acknowledged that effective implementation was taking time, but that, as we heard more than once, the system should “hold its nerve”. Because of effective collegiate and partnership working, Management Board leaders believed that “the Government should allow the profession to consolidate changes and new pedagogies that have been made” and not over-react to any “crisis of

confidence” that may have emerged about being able to demonstrate progress (see our earlier discussion on CfE “at a watershed” in Chapter 3).

The Management Board recognised that not developing benchmarking instruments in the early stages of implementation may have been a mistake. Representatives from one of Scotland’s leading universities also felt that there was a “lack of hard evidence” about the implementation and impact of CfE and that more could have been done to develop closer and more systemic relationships between the Government, the Management Board for CfE and the collective research intelligence and capacity of the universities. There was a call for a “more vibrant research community” of collaboration among the different universities that could inform and respond to government policy.

The main study of implementation of CfE is a 2011 investigation, using an online survey and in-depth interviews in one of the 32 local authorities (by Mark Priestley and colleagues). Their data suggest “a widespread engagement by teachers with CfE in respect of pedagogy, assessment and provision [curricular models]” and CfE’s ideas are welcomed by the profession. However, there are “highly variable rates of progress, both between and within schools” (Priestley and Minty, 2013, p.44; also Minty and Priestley, 2012). Primary schools had made more progress with whole-school, topic-based and project-based interdisciplinary approaches than secondary schools where the curriculum remained too often conventionally subject-based. A range of new practices was being embraced by teachers, and their adoption was being enhanced by a move towards collaborative and collegial working”, but the researchers were not convinced that teachers were engaging deeply with CfE’s underpinning ideas in their work together (also Priestley, 2013).

The review team visited eight schools in South Lanarkshire, East Lothian, Glasgow and Na h-Eilean Siar. Everyone the review team met was able to recite the four capacities: principals knew them, teachers referred to them, and young people could articulate them. They were inscribed in binders and mounted on the walls. As Ministry officials put it, “The four capacities are going up the stairs”. “We all say them in our sleep”. “People are getting better at talking about what they are doing”, a member of the National Implementation Board for TSF said, and pervasive familiarity with and valuing of the four capacities is clearly a good start.

The pillar that seemed most in evidence to the review team was “confident learners” who, in line with the first pillar, are also motivated and enthusiastic. All learners we met, not just those who were assigned to us, were able and willing to speak confidently about their learning, their aspirations, and the extent to which they were engaged in school. Teachers said that children were much more aware than they used to be of why they were learning something. We saw powerful interdisciplinary projects on topics like World War I and Hebridean crofting. We saw drama and expressive dance for young children – elements that have almost completely disappeared from systems that have over-committed to high-stakes testing and curriculum prescription. Students were unanimously positive about out-of-school and residential learning, which is a core rather than peripheral part of CfE, for all students. A number of educators referred to the increased numbers of students taking the challenging Duke of Edinburgh’s award scheme in outdoor pursuits and community service following the introduction of CfE. Primary school students especially came across as highly engaged with their learning – echoing the survey results on engagement mentioned earlier. In one secondary school in Glasgow, when students were asked what the best thing was about their school, their choral response was “the teachers”.

But in general, system-level respondents were in agreement with Priestley's and Minty's research finding (2013) that implementation progress in secondary schools was less impressive – a problem that is common in many other countries, and connected to the continuing press of examinations as the ultimate assessment priority (see Chapter 5).

CfE rationales

We can identify three key rationales for the *Curriculum for Excellence*:

- Creating learning experiences and outcomes that infuse the curriculum and teachers' pedagogy with qualities of engagement so that students will enjoy their learning, find it relevant, and through it be able to develop all of themselves and the best of themselves.
- Enabling, encouraging and empowering teachers' professional judgments to make the best pedagogical decisions for all their students.
- Resisting inflexible standardisation in order to respond to the diversity of local needs and circumstances in each region and community.

CfE seems to be increasing student engagement. More metrics could be used to underline this success and communicate it to the public. As one member of the National Implementation Board for TSF said, "Young people and the profession are convinced but the public are not". In addition to stronger data on student engagement, there also needs to be a clearer narrative for the profession and the public about the link between engagement and achievement. OECD (2013) data indicate that there are a number of high-achieving nations where many students are not happy with school. These high achievement/low engagement systems include Korea, where students describe their secondary school experience as "Examination Hell", and Finland, which has responded to the OECD results by emphasising greater joy in teaching and learning, and introducing more interdisciplinary projects into the classroom. Engagement is as important as achievement and probably the best way to secure it. Scotland should not therefore forsake its accomplishments in student engagement, but it does need a clearer narrative, better communication and stronger metrics so that the public and not just the profession understand and are inspired by the relationship between engagement and achievement.

The second rationale for CfE (or "direction of travel" as it was commonly referred to) is the importance attached to the professional judgment of teachers and leaders. CfE is neither a prescribed curriculum nor a completely permissive one. It has four pillars, the Es and the Os, eight curriculum and three interdisciplinary (literacy, numeracy, and health and wellbeing) areas – and then over 1 000 pages of curriculum materials. We asked teachers how they planned their curriculum based on these extensive materials and guidelines. In primary schools at least, we did not encounter backward mapping – beginning with the desired outcomes, then planning pedagogy and content backwards from that point. This could be a merciful blessing as teachers in many US states, for example, are often overwhelmed by standards-based curricula that drive their lesson planning with a complex plethora of spreadsheet categories of standards and sub-standards. Instead of backward mapping, Scottish teachers seem to invest their passions and enthusiasm in projects and other curriculum content, planning alone and with colleagues to create something relevant, engaging and challenging for their students. If CfE is consciously used, teachers sometimes said, it is subsequently to check that the outcomes and experiences have been addressed thoroughly.

The third rationale for CfE is that it permits and promotes responsiveness to local diversity - be this a Lanarkshire former coalfield town, or a Glasgow community with high ethno-cultural diversity. Few experiences in Scotland can command a more distinctive sense of place than landing on the thin airstrip next to a deserted white-sand beach in Stornoway in Na h-Eilean Siar. The local authority for this community stretches as long as a line drawn from Glasgow to Aberdeen, yet barely 27 000 people live within it. The public sector is the largest employer at around 30% of all employed people. There is a small but prosperous crofting and associated tourist industry, and there are hopes of a future economy in sustainable wave and wind technology. Gaelic medium schools as well as Gaelic medium culture and media provide a distinctive focus and choice, and also further employment opportunities. The curriculum of the Na h-Eilean Siar is also strong on global awareness due to the history of the people as a seafaring community. And the local authority has partnered with US and Nordic rural school initiatives to share knowledge and develop ideas on place-based education.

Teachers in Na h-Eilean Siar and elsewhere, who were in teaching before the advent of CfE, said that it had been a “breath of fresh air”. It had replaced a system of “counting minutes and percentages” offering “no room for movement”. As we will see in the next section, though, while teachers often plan collectively it is less clear how much of that planning pays explicit attention to the CfE framework. Priestley and Minty’s research (2013) along with some of the review team’s observations also indicate that teachers and principals sometimes had difficulty articulating where the curriculum of their class and school really stood within the CfE narrative. It is not surprising therefore if some parents (and also senior players) declared the terms and categories of CfE to be less clear and persuasive than they might be.

The capacity of teachers to use their professional judgment effectively will depend on the strength of teacher preparation and continuing professional development in relation to CfE philosophy and priorities, and on the leadership at school and local authority levels that will enable teachers to work effectively together in achieving these priorities. We come back to these matters below.

As well as the broader goals of CfE, there is and always will be an abiding importance assigned to literacy and numeracy. The Scottish Government is very concerned about literacy standards not just because of a slight fall in recent test scores but also because of its commitment to equity.

Unlike some jurisdictions such as Ontario, there has been no national strategy for literacy or numeracy. Local authorities choose their own programmes and materials, though in practice many have purchased the same one. Concerns were expressed to the review team about standards of literacy and numeracy among some newly-qualified teachers. There was not agreement among university faculty about whether more evidence-based strategies and programmes should be presented to newly-qualified teachers and to teachers undertaking continuous professional development. Mainly, literacy strategies are spread as a kind of contagion. The newly-proposed National Improvement Framework is seeking to bring more coherence to literacy and numeracy strategies, there is an Insight evaluation tool now being used by all 32 authorities (see Chapter 5), and specific interventions are emerging – such as in North Lanarkshire - where 30 minutes a day are being devoted to bringing children’s reading ages up to their chronological age.

Student achievement and equity in literacy and numeracy are burning issues for Scottish education at this time. The Cabinet Secretary for Education and the First

Minister are on record as saying that children need to be happy and fulfilled in school, but that they should also be challenged more. The gaps between the lowest performing local authorities serving the most disadvantaged populations and the higher performing authorities need to be narrowed. There are some systemic solutions to this that will be explored later in the chapter. The reforms required, the Ministry said, need not be “onerous or punitive”. But waiting another decade for greater equity is not acceptable.

One relevant model is Ontario, because of its significant gains in literacy. In the matrix of bold and less bold reforms, Ontario is seeking to become bolder in ways that match the spirit of CfE and Scotland could learn from its successes. But it should also be alert to cautions arising.

- Ontario has been more successful in raising the bar than narrowing the gap (see Chapter 2).
- The achievements in literacy have been more significant than those in numeracy, suggesting, as elsewhere, that simultaneous large-scale literacy and numeracy reform may not be successful or sustainable.
- The reforms were undertaken in a period of professional investment and prosperity, whereas the partnership between Government and the profession is proving to be much more fragile in the current climate of austerity.

A major challenge for Scotland and elsewhere is how to stay bold and to build on what has already been accomplished in a way that is as persuasive to the public as it is to the profession, and that can achieve greater equity for all pupils sooner rather than later. It will need to increase the value assigned to data and research evidence alongside professional judgment, on the one hand, while maintaining the consensus that comes through collaboration and partnership, on the other. How to stay bold but also more precise in bringing about equity for students who live in conditions of disadvantage and poverty? It is to this issue that we turn next.

Innovating secondary school learning environments in disadvantaged areas

We concluded Chapter 2 with recommendations stating in broad terms the need to focus on the nature of teaching and learning, pedagogy and assessment, and the design of learning environments. Among the many measures and strategies addressing equity under 12 headings and reviewed in that chapter, we feel that close attention to the actual nature of the teaching and learning experience was less in evidence than it will need to be if the quality of those experiences and the engagement especially of students at risk of disengagement are to be raised. We stressed that this was additional to not instead of a priority focus on the early years – the one being about laying very firm foundations, the other about ensuring rich learning experiences for students in stimulating environments at the time when problems of engagement most arise.

A drive in this direction will call for leadership to be exercised at every level. We expect that it will need the drive of national leadership to give it prominence, legitimacy and initial resources. It cannot be done effectively just through one or two exemplary schools and through professional development that, it is hoped, will translate into new classroom practices. This means that it will call for leadership in and from the middle as discussed later in this chapter. It will need whole schools, their leaders and staff to engage not just enthusiastic individual teachers. And, given the contexts of areas of disadvantage, it will need the close involvement of the communities and families involved.

This might be seen as a parallel to the Scottish Attainment Challenge which is for particular areas with the highest deprivation levels, though this time focused on innovating learning environments in secondary schools. The actual design should be in the hands of those closely involved at the different levels but we can suggest the factors to be taken on board.

- It will help if the drive towards further improvement in teaching and learning is grounded firmly in knowledge about powerful learning, which by itself calls for innovation given the nature of many school and classroom practices. This has been reviewed by the OECD in its work on Innovative Learning Environments, and summarised in terms of seven “principles” (Dumont et al, 2010):
 - Make learning central, encourage engagement, and be where learners come to understand themselves as learners.
 - Ensure that learning is social and often collaborative.
 - Be highly attuned to learners’ motivations and the importance of emotions.
 - Be acutely sensitive to individual differences including in prior knowledge.
 - Be demanding for each learner but without excessive overload.
 - Use assessments consistent with these aims, with strong emphasis on formative feedback.
 - Promote horizontal connectedness across learning activities and subjects, in-and out-of-school.
- The drive will call for a mix of pedagogies, including those intended to activate discovery and engagement and project-based work, which have been promoted through CfE to date. We cannot say in advance how such a mix should be determined. A review conducted for OECD as part of its work on equity, quality and disadvantaged students (OECD, 2012) suggested that the mix should include more traditional approaches to help ensure sound understanding and knowledge as well as stimulating, student-centred pedagogies: “the use of direct and student centred instruction, summative and formative assessment, and common, authentic and integrated curriculum with clear, challenging goals and no dead-end courses should be promoted at the school and classroom levels (Faubert, 2012: 10). Whether more or less traditional, direct teaching or student-centred, it will often need to be collaborative with teaching done in teams.
- Connecting to the families and communities of the students, and giving the students themselves an active voice, will be essential. Scottish education is already oriented to learning in and through communities which offers a very sound platform for this. Engaging with families is critical. An example is the Learning and Change Networks in New Zealand, reviewed as part of the recent OECD publication *Schooling Redesigned* (OECD, 2015b). This is a particularly relevant example as the work is embedded in networks (the “middle” or meso level), is strongly targeting equity priority students, and puts learning front and centre.

- The drive will call for high levels of teacher engagement and expertise – the professional capital discussed in the next section. By working through networks and clusters, and engaging closely with the local authorities and with the research community, one outcome – both a prerequisite and a result – will be to make teaching more attractive in the very schools and communities that most need the best teachers.

In order for the innovations and the work to have an impact beyond the participating schools, communities, networks, and local authorities we suggest the strong engagement of the Scottish research community – in design, evaluation, and preparation of materials for wider diffusion. Outcomes from such work should be widely communicated across Scotland, to schools, clusters and local authorities. They could usefully be integrated into teacher education, initial and continuing. Such work might also come to influence inspection frameworks. There may well be a role for foundations to play, especially in supporting the key research and development side of the work; we note, for instance, the valuable review carried out by the Joseph Rowntree Foundation on closing the attainment gap in Scottish education (Sosu and Ellis, 2014).

Teachers and professional capital

Underpinning CfE are four important principles. First, there is the *inspiration* of CfE's philosophy that has largely been convincing for the profession and many young people, but we suspect less persuasive for parents and the public. Second, there is a return to and reinvention of the *individual responsibility of teacher professional judgment*. Third, there is opportunity for *professional learning and development*. Finally, there is the benign *contagion through the circulation of ideas and strategies* that diffuse and can catch on across the system.

Curriculum for Excellence expects teachers' professional judgment rather than external accountability to be the foundation for quality and improvement. Professional judgment is the ability to exercise earned expertise and make wise decisions, and to do so in circumstances when the right answer is not obvious or given by data, research, statute, or regulation. But just because people belong to a profession does not mean that decisions should always be left to their professional judgment. Effective professional judgment, rather, results from deliberate processes and structures of preparation, continuous learning, and collegial interaction in communities of learning.

Professional judgment is established and improved through investing in teachers' professional capital. *Professional capital* is made up of three kinds of capital (Hargreaves and Fullan, 2012). There is *human capital*, which consists of the individual qualities and capabilities of teachers - individual responsibility, self-efficacy (someone's confidence and belief that they can have a positive impact), qualifications, knowledge and skills. *Decisional capital* refers to the development of judgment and expertise over time through practice and experience and through being challenged and stretched to extend one's repertoire as a professional. *Social capital* is about the capital people possess together, about collective efficacy (their shared belief in their capacity to make a difference together), collaboration, and collective responsibility.

Scotland has an historic high regard for learning, education and teachers, and the trust it invests in teachers' professional judgment is an admirable counterbalance to the trends in many Western countries which have seen the status of teachers and teaching decline in past decades (OECD, 2014; Schleicher, 2015). The importance assigned to teachers'

professional judgment in the implementation of CfE is grounded in the influential 2011 report, *Teaching Scotland's Future* (Donaldson, 2011). TSF made an inspiring call for a stronger teaching profession, analysed the current situation in Scotland and set out 50 recommendations for change. Most of these recommendations, we were told, have now been implemented.

Human capital

The human capital aspects of teachers' professional judgment in Scotland are established in initial teacher education (ITE) and addressed by a national framework for professional teaching standards. In line with best practices worldwide, ITE in Scotland is all-graduate, grounded in university-based training that is also closely connected to practice in schools. Partnerships with local schools and local authorities have been strengthened with the support of Government funding following the TSF recommendations. Subject-based studies accompany education in pedagogy through concurrent and post-graduate models of training, ensuring that newly-qualified teachers are well prepared in content knowledge as well as teaching methodology. There is a prudent number of initial teacher education programmes in Scotland in eight universities: a ratio that assists the possibilities of coordination and coherence and is in line with higher performing countries. In no documents that we read or interviews we conducted did we come across any major reservations about the overall quality of candidates entering the teaching profession, and in general applications to ITE were described as "buoyant".

In general, teaching is regarded as a desirable occupation in Scotland, recruitment is solid, and the human capital of teachers who enter the profession seems to be strong. There is a broad framework of guidance for ITE in Scotland, and not a prescribed curriculum. While this underlines the professional autonomy and judgment of universities, some high priority areas such as literacy might benefit from greater consistency. Faculty we met seemed to differ about whether or not more consistent use should be made of evidence-based strategies, and the variation among universities in literacy strategies parallels similar variation among local authorities. Overall, there is a case to be made for a nationally-agreed approach to literacy in teacher education and among local authorities as one of the ways to secure equity.

In Scotland, the desired characteristics and qualities of human capital are enshrined in an inspiring set of professional standards that, following revision after TSF, are based on core values of social justice, integrity, trust and respect, and professional commitment through undertaking processes of professional enquiry. The Standards have been defined by the *General Teaching Council of Scotland*, (the first self-regulating professional organisation for teachers in the world). The standards are bold and supportive of high quality individual professional judgment; they envisage teachers becoming "extended professionals" (Hoyle, 1974), who are committed to continuous professional learning and engagement with ideas and information from outside their own classrooms as well as within them. However, standards frameworks are much harder to implement effectively than to set in the first place. There is a question of how deeply the GTCS standards have moved from the theory to the practice and become embedded in the professional culture of the Scottish educational system.

Box 4.1 The Netherlands: Teachers Agenda 2013-2020

The Netherlands is one of the top performing countries outside Asia on PISA measures and also consistently ranks the best of all countries on UNICEF's (2013) indicators of child wellbeing. In a context of increasing cultural diversity and with the aim of improving its educational system still further, the Dutch educational system aims to improve the teaching profession through a comprehensive strategy called the Teachers' Agenda 2013-2020 (*Lerarenagenda 2013-2020*). The main aspects of the programme are:

1. Attracting high performing students into teacher training programmes.
2. Improving teacher pre-service training programmes.
3. Providing attractive and flexible development pathways.
4. Developing support for teachers at the start of their careers.
5. Developing schools as learning organisations by engaging teachers, school leaders and school boards.
6. Helping all teachers maintain and develop their skills and qualifications.
7. Sustaining a strong professional organisation that represents teachers.

This agenda seeks to identify, recruit, attract, retain, support and develop high quality teachers as potential leaders. Strong leadership will enable schools to develop as learning organisations enabling teachers to participate fully in the decision-making process with school leaders and school boards. The goal is to enable higher professionalism to emerge supported by a strong professional organisation that represents teachers.

Source: OECD (2015a), *Education Policy Outlook 2015: Making Reforms Happen*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264225442-en>

Decisional capital

The GTCS's "Standard for Career-Long Professional Learning" is designed to help teachers reflect on their professional learning choices which are their individual responsibility. The standard supports teachers so they can "develop and enhance their practice, expertise, knowledge, skills and professional values", not by teachers receiving large amounts of required training but by their own learning to develop their own competence and confidence and contribute to the effectiveness of their professional community. Career-long professional learning is a matter of *decisional capital* – the deliberate development of judgment and expertise over time.

Unlike many lower-performing systems of education, teachers in Scotland are not subjected to large amounts of mandated training that leave little room for self-guided professional learning experiences or for such learning being pursued through the guidance of school leadership on the options available in relation to shared directions. A minimum of 35 hours of professional development per year is required for teachers in Scotland. A GTCS initiative has also established "Professional Update", which requires teachers to record their professional learning as a condition of registration thereby promoting

continued professionalism throughout their career. This learning includes such diverse activities as undertaking a Master's degree, participating in courses of professional development, or undertaking action-research within one's school.

An integral part of the shared commitment to a highly professionalised model of teaching is support for growing numbers of teachers to undertake Masters degrees. This was a recommendation of *Teaching Scotland's Future* and is in line with best practice internationally in systems such as Singapore and Finland (Hargreaves and Shirley, 2012; OECD, 2011a). From 2012 to 2015, the Scottish Government allocated GBP 1.3m to support almost 500 teachers to complete professional development up to Master's degree standard, and another GBPGBP 1.7m to support 20 Local Authority projects involving 1 500 teachers to undertake accredited work towards a Master's degree. In a primary school in South Lanarkshire visited by the Review team, three teachers were working towards their Masters degrees; in a secondary school in West Lothian, 12 teachers were studying for theirs with financial support from the Local Authority.

There is encouragement for and movement towards a stronger teaching profession in Scotland – shifting it towards some of the highest performing systems in this regard (OECD, 2014b). There are many opportunities for teachers to engage in professional learning. These opportunities include online engagement through Scotland's national digital learning platform, GLOW, which enables teachers to share resources and practices virtually. The McCormack Report of 2011 concluded, however, that “much current provision is more haphazard than the formal arrangements suggest” and that “professional review and development is at best patchy in its impact and not fulfilling its intentions”. Teacher union leaders we met also argued that it was important to “free up schools to free up teachers to do what they know is best for their students”. OECD's 2013 TALIS data highlight concerns about lack of equity in access to high quality professional learning, especially for teachers working in disadvantaged settings (OECD, 2014b); in Scotland, this is especially an issue in rural and remote communities. Several expressed concern about providing adequate levels of support for teachers' continuing professional learning in the current economic climate of austerity.

After a period of elevating and expanding professional learning opportunities, the next stage for Scotland is to address the need for greater coherence and consistency, especially in a period of national focus on educational equity. We would advise against national programmes of mandating training in particular pedagogies such as those that have been employed under the *No Child Left Behind* legislation in the United States: there is no evidence that they have authentically raised educational achievement, while other evidence suggests that they have led to declining morale and attractiveness of the teaching profession. But bottom-up choices can become fragmented and are not the only alternative to top-down imposition of approved pedagogies. One answer is for the 32 local authorities to work in closer partnership on equitable and high quality provision of professional learning that is more related to Scotland's as well as each community's priorities. Another answer is for the teacher unions along with the *General Teaching Council of Scotland* to take on a more prominent role as leaders of effective professional learning.

One of the central aspects of decisional capital in any profession is the development of what the psychologist Albert Bandura (1995) has called “self-efficacy”. Self-efficacy is the belief in one's ability to successfully accomplish tasks in particular circumstances. Self-efficacy in teaching is a teacher's belief that he or she can have a positive impact on pupils, even in adverse conditions and circumstances. A quarter century ago, Ashton and

Webb (1986) found that teachers with a lower sense of efficacy were more preoccupied with covering prescribed content and their students also had lower achievement. Rosenholtz (1989) found that teachers who felt that student achievement was determined by factors out of their control produced lower levels of achievement and made fewer changes in their own teaching. In a more recent study of factors determining teacher quality and effectiveness, Christopher Day and his colleagues surveyed and interviewed 300 UK teachers in 100 schools over a 3-year period about their sense of their own effectiveness, and connected these results to value-added achievement measures. Effectiveness in outcomes was closely connected to teachers' sense of self-efficacy and their commitment to their work and their students. "For commitment to flourish and for teachers to be resilient and effective", the researchers found, teachers needed to have a "strong and enduring sense of efficacy" and to work in morale-building environments of policy, leadership and collegiality (Day, Sammons and Stobart, 2007).

Box 4.2 The Alberta Initiative for School Improvement (AISI)

The Alberta Initiative for School Improvement (AISI) has been an approach to improving student learning by encouraging teachers, parents and the community to work collaboratively to introduce innovative projects according to their local needs. The AISI was initiated in 1999 and it is now completing its fifth year cycle (2012-2015). The AISI's platform allows schools and districts to develop teachers' professional capital in curriculum and pedagogical development through its process of collaborative inquiry. Teachers in 95% of schools have been involved in continuous inquiry as a routine part of their professional practice (Hargreaves and Shirley, 2012).

The AISI was initiated and sustained through close partnership between the Alberta Teachers Association (ATA), the Alberta Government and other professional partners such as the Alberta School Boards Association. ATA is the single professional organisation to which Alberta educators belong and includes school principals and district (local authority) superintendents as well as classroom teachers. In addition to the typical collective bargaining functions, the ATA spends around half of its overall budget on professional development, educational research and public advocacy for a stronger teaching profession, improved teaching and learning, and greater innovation. This compares to figures as low as 2%, for example, in teachers' unions and associations in the United States.

TALIS 2013 clearly shows Alberta's strong commitment to teacher professionalism. Alberta teachers are more likely to report participating in professional learning than teachers in other TALIS participating countries: 85% reported participating in courses and workshops (71% TALIS average); almost 80% participated in education conferences (44% TALIS average); nearly two-thirds belong to a professional network (37% TALIS average); and, almost half of them were involved in individual or collaborative research (31% TALIS average). Most Alberta teachers reported participating in professional learning, considerably higher than in other countries (4% reported never participating in professional learning compared with 16% TALIS average). Alberta's development of teachers' professional capital, in a system where the province's professional association takes a leading role, is a key factor explaining its successful education system.

Sources: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, TALIS, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264196261-en>; Province of Alberta, Minister of Education (2014) *Teaching and Learning International Survey (TALIS) 2013*, *Alberta Report*, Minister of Education; Hargreaves, A. and D. Shirley (2012), *The Global Fourth Way: The Quest for Educational Excellence*, Corwin Press, Thousand Oaks, CA.

TALIS (2013) confirms these findings regarding teachers' efficacy (also Tschannen-Moran and Barr, 2004). Higher levels of self-efficacy are associated with more teaching experience (Schleicher, 2015). In Day and his colleagues' research, the peak of efficacy and impact was between 8 and 23 years into the teaching career, when expertise had been refined to a very high standard (Hargreaves and Fullan, 2012).

Strong self-efficacy and its positive impact on student learning therefore grow over time, especially through deliberate development of decisional capital. One way to embed the growth of self-efficacy in this way is through support for teacher leadership, which includes but extends beyond distributed leadership (Harris, 2008; Spillane, 2006). Teacher leadership entails initiating improvement and innovation practices within and beyond their schools (Lieberman and Miller, 2011). Teacher leadership develops teachers' competence and confidence as educators, advances their professional learning, promotes change and improvement in schools, encourages professional collaboration and collegiality, and boosts professional status and recognition.

Box 4.3 The Ontario Teacher Leadership and Learning Programme

The Ontario Teacher Leadership and Learning Programme (TLLP) is an eight-year initiative that began in 2007 to support teachers' self-directed advanced professional development and leadership skills, and for them to spread this with colleagues through conferences and storefronts, a virtual platform, and sharing ideas within each involved school. The programme rests on teachers designing and evaluating their own innovations and sharing what they have learned. It is particularly targeted at teachers who have been in the profession for more than four years – an area that was seen as neglected in professional development provision. Each funded project, in which teams of various sizes participate, lasts 18 months, and nine cohorts have undertaken it to date. The programme has been developed in partnership between the Ontario Teachers' Federation and the Ontario Ministry of Education and many hundreds of teachers have now experienced it.

An evaluation found that over 70% of the respondents report that they have acquired new knowledge, improved their own practice, and developed leadership skills in facilitation and project management. Over half believed that they had increased their self-efficacy and the evaluators conclude that this percentage would be even higher if projects lasted longer and were more deliberately integrated into other school or wider developments and initiatives.

Source: Campbell, C. Lieberman A. and Yashkina, A (2014) with N. Carrier, S. Malik and J. Sohn, *The Teacher Learning and Leadership Program: Research Report 2013-14*, Toronto, Ontario Teachers' Federation.

In 2001, the Committee of Inquiry in Scotland created a career structure for teachers, which is accepted across the profession in all sectors: classroom teacher, principal teacher, deputy head and head (Scottish Executive Education Department, 2000). This flat structure for the teaching career is not typical of higher performing countries where, in Finland for example, teachers can take on many extra duties and responsibilities (Sahlberg, 2014), or in Singapore, where teachers are mentored along different career paths for Master teaching, curriculum leadership or administrative leadership (OECD, 2011b). Teachers in many countries are hungry for more leadership and recognition; for leading change and not just managing what is given to them. In the United States, the most recent Metlife survey of teachers revealed that high numbers of teachers were eager for more leadership opportunities, even though they did not want to be principals

(Markow, Macia and Lee, 2013). At the same time, teacher morale had dropped more quickly than at any time since the statistics began.

The importance of teacher leadership in the growth of the decisional capital was recognised by the introduction in Scotland of a new category in the profession called Chartered Teachers in 2006, as part of the *Teaching Profession for the 21st Century* agreement. Chartered Teacher status, accumulated through programmes of study and projects undertaken in teachers' own schools, was meant to recognise and reward the excellence, and encourage the continuous professional learning, of those teachers who wished to remain classroom teachers. After the completion of the qualification, teachers received a significant and lifelong salary increase. So popular did the programme turn out to be, however, that, in a climate of austerity, the local authorities found that the costs of the scheme were placing too much of a strain on their budgets. Following one of the recommendations of *Teaching Scotland's Future*, therefore, the Chartered Teacher Scheme was discontinued in 2012.

There were pressing financial reasons for being unable to sustain the Chartered Teacher scheme at a time of economic austerity but it is essential that there is a clear career structure and process that grows the profession, its decisional capital, and its leadership within and beyond the classroom. This helps to maintain and improve teachers' commitment and self-efficacy, it is an investment in leadership throughout the system, and it provides the recognition to maintain morale throughout the profession. A self-sustaining chartered teacher model is currently being explored by the Scottish College for Education Leadership.

We advise against using government mandate and curriculum prescription in literacy or other areas of the curriculum as the means for creating greater coherence in the professional learning agenda. We see the need, including through project funding stimulation, to increase the capacity of the teacher unions and the GTCS to take on a greater role in providing and synchronising professional learning provision. Second, as we will see in the next main section on leadership, there needs to be greater cohesion among the 32 local authorities in certain areas – one of which is professional learning. This could be achieved in partnership with the professional associations and with *Education Scotland* as part of developing the “middle” and re-centring the gravity of CfE.

Social capital

“Social capital” is about the capital that people possess together. A school is greater than an aggregate of its teachers individually when those teachers work together effectively. Social capital is about collective efficacy, collective responsibility and collective autonomy.

- *Collective efficacy* refers to the belief that we can have a positive impact together, as compared to self-efficacy that is about what one thinks one can do by oneself. Collective efficacy has a demonstrated positive impact in crime prevention, public health and educational achievement (Bandura 1995; Goddard, 2001).
- *Collective responsibility* is about teachers' shared responsibility for all students and their success in a community, whether across departments and year levels, teachers of special education and those in more general roles, and across schools in the same locality (Hargreaves and Shirley 2012; Ainscow, 2015).
- *Collective autonomy* means that teachers have high autonomy from the requirements of top-down accountability, but low autonomy from each other as fellow-

professionals making judgments and developing expertise together (Hargreaves, 2015).

Social capital adds value to human capital (Leana, 2011). Whatever the existing levels of human capital, developing effective social capital raises performance as it boosts common commitment, builds shared trust, circulates ideas and practices, and develops genuine shared responsibility for each other's success. Teachers who work in cultures of professional collaboration have a stronger impact on student achievement, are more open to change and improvement, and develop a greater sense of self-efficacy than teachers who work in cultures of individualism and isolation (Lortie, 1975, Rosenholtz, 1989; Newman and Wehlage, 1995). Day and his colleagues (2007) found that 63% of teachers felt that good colleagues who valued teamwork and who provided support when things went wrong were a vital part of being able to sustain their own commitment to the work.

The TALIS (2013) survey of lower secondary school teachers indicates that teachers who report participation in professional development activities involving individual and collaborative research, observation visits to other schools, or a network of teachers are more likely to report using teaching practices involving small groups, projects requiring more than a week for students to complete, and information technology. The TALIS results in the highly professionalised Alberta system underline the importance of social capital with high levels of collaborative activity (see Box 4.2).

It is not easy to discern the exact nature or extent of social capital among teachers in Scottish schools. In our meeting with the National Implementation Board for *Teaching Scotland's Future*, we heard the emphasis to be on individual professional responsibility within a broader collegial context. The GCTS's "Standard for Continuous Professional Learning" includes references to "working collegiately with all members of our educational communities", working "to create, contribute to, and lead a collegiate culture, through collaborative enquiry, peer observation with constructive feedback, professional dialogue and debate"; working "collaboratively across disciplines, professions and communities" and being able to "lead and contribute to the professional learning of all colleagues, including students and probationers". In their review of the implementation of *Curriculum for Excellence* within a single Local Authority, Priestley and Minty (2013) state that "in both primary and secondary schools significant progress seemed to have been made in respect of collaborative and collegial working practices". In interviews conducted by the OECD Review team, participants at all levels repeatedly referred to the existence of collegial working. Teachers and leaders in the schools we visited mentioned examples of collaborative curriculum planning of interdisciplinary projects, moderation meetings with other schools, processes of collaborative enquiry into teaching and learning, and procedures of validated school self-review.

At the same time, we do not see in the recommendations in *Teaching Scotland's Future* a strong focus on the social capital of collaborative professionalism beyond one-to-one coaching and mentoring. Members of *Education Scotland* and other senior system leaders insisted, however, that collegial working on the ground had become widespread since the implementation of the TSF report.

Beyond whether collaborative professionalism and collegiate working are widespread throughout the Scottish system, there is the key question of whether collegial working is consistent and whether the particular kinds of collaborative practice that are common are effective in terms of their benefits for students. For instance, Priestley and Minty (2013) found that while teachers they studied would share practices and plans related to their teaching of CfE, there were "only occasional examples of meeting with colleagues to

discuss the meaning of the principles of CfE” (pp. 48-49). The 2011 McCormack Report argued that local communities of practice needed more access to external support and challenge. One of the secondary schools we visited engaged in collaborative professional learning with other schools, but felt that it came down to them to take the initiative. A coherent strategy for developing the social capital of teacher professionalism in the Scottish educational system in ways that will be productive, interconnected and effective would be beneficial.

Not all kinds of professional collaboration are equally effective. In their study of school-to-school collaboration in England, Chapman and Muijs (2013) found that many of the networks had no positive impact on student outcomes. Hargreaves and Fullan (2012) warn against professional collaboration that is unfocused and vague, on the one hand, or contrived to support top-down accountability, on the other. The OECD Review of the improvement strategy of education in Wales (2014a) found that despite a national commitment to train teams in every Welsh school to operate as a professional learning community, the weak focus and lack of follow up in time and resources meant that this move towards collaborative teacher professionalism was never properly implemented. Bryk and colleagues (2015) argue that schools participating in networked learning communities need to emulate the use of improvement science in medicine and select a precise instructional focus for their networking efforts.

Scotland (and other systems) need greater clarity about the kinds of collaboration that work best to bring about the innovations and improvements that will enhance student learning, and to create coherent and cohesive cultures of system-wide collaboration. The McCormack Committee suggested that school-level planning should not only be collaborative but should focus more clearly on the best outcomes for pupils. This is not an argument for mandated collaboration or contrived collegiality to implement centrally defined strategies. But it is to argue for greater consistency in collaborative professionalism and of moving towards the higher quality collaborative practices that have the most positive effects on student learning.

Leaders and leadership

One of the greatest challenges of CfE is to combine pedagogical depth with system coherence and consistency in quality of provision and level of outcomes. As Chapter 3 made clear, leadership by central governments is essential for setting visions and broad parameters and it can create alignment in system design. But it often comes up short when it gets to the classroom door. Even when there is some success in passing through the door, this has most often been with simple, easily prescribed pedagogies in specific areas like literacy and numeracy which involve little pedagogic penetration, depth or sophistication. Higher-order learning is sacrificed, and the attraction of teaching erodes once professional judgment is held hostage to fidelity to the script. Top-down leadership can have a place in raising the bar of lower performing systems where pedagogy is poor and teachers’ professional capital is weak. But it is unsuited to directing the bold commitments to innovation and improvement that are represented in CfE.

By comparison, the bottom-up leadership of thousands of teachers and their principals in school-based innovation and development efforts has the potential to get behind the classroom door and achieve considerable pedagogical depth. But it is extremely difficult to rely on the accumulated impact of many diverse school-based and teacher-driven innovations, even when networks, partnerships and consensus are established, and ideas

are spread. There is innovation in many places, and pedagogical depth in some of them, but no means to ensure that there is breadth of impact of genuinely deep practice.

Leadership in and from the middle

Beyond the binary division between top-down and bottom-up, Chapter 3 introduced the importance of the middle or meso level of educational leadership. “Leading in the middle” occurs through networks, partnerships, and collaboratives among schools and across local authorities. In Scotland, it has included the multi-agency approach of the *Early Years Collaborative*; the collaborative efforts of *Raising Attainment for All* to improve equity and shared learning across two-thirds of the local authorities; the GBP100 million *Scottish Attainment Challenge* where seven local authorities with the highest concentrations of students in deprived areas use “Attainment Advisors” (and the identification of a further 57 schools eligible for additional funding and the appointment of Attainment Advisors in the remaining 25 authorities) and high quality professional learning to improve primary school outcomes; and the *School Improvement Partnership Programme* which brings together local authorities and university researchers to address issues of educational inequity. All these strategies represent what GTCS referred to with us as the “Scottish Way” - to have integrated partnership working at the strategic level which is then reflected in high quality delivery of teaching and learning at the sharp end of the system.

“Leading in the middle” is about the movements already underway for local authorities, schools and networks to work closely together to share and circulate strategies and ideas that increase excellence and equity. This chapter advances the argument and advice of Chapter 3 by recommending that leadership of *Curriculum for Excellence* should consider moving now even further and more ambitiously than leading in the middle (which should, of course, continue) to leading *from the middle*. When asked about the levers for development and further implementation in *Curriculum for Excellence*, a national-level system leader said there were “32 levers” – the levers of the influential local authorities. These levers, we suggest, now need to pull and be pulled more explicitly together. “Leading from the middle” takes the intermediary layer of implementation and diffusion to a point where it becomes the empowered locus of collective initiative and responsibility.

Scottish educators value their local authorities with all their variations and particularities. The readiness of local authorities to engage their distinct and diverse experiences is a good kind of variation. But it is not a good thing for students, families and educators if these differences of character and culture turn into differences of quality. It is this kind of negative variation that approaches such as the *Scottish Attainment Challenge* seek to redress. It is a prime reason for leading from the middle. When local authorities and other organisations and entities lead from the middle (Hargreaves and Ainscow, 2015), they:

- Respond to local needs and diversities.
- Take collective responsibility for all students’ and each other’s success.
- Exercise initiative rather than implementing other people’s initiatives.
- Integrate their efforts with broad system priorities.
- Establish transparency of participation and results.

Box 4.4 The Greater Manchester Challenge

The Greater Manchester Challenge (GMC) in England was a three-year project that galvanised ten local authorities to promote system-wide equity and improvement. Many strategies were used to achieve the goals of the project. Challenge Advisers worked with all the authorities to improve their practice and results. Leaders of successful schools worked with weaker schools across local authority boundaries to improve their leadership teams. The ten local authorities drove improvement together. Schools that excelled in particular areas trained teachers in other schools and local authorities. The authorities were able to overcome old rivalries in pursuit of the common good of students and the community.

By 2011, after three years, GMC schools were above the national average on all standardised test measures. Secondary schools in the most disadvantaged communities improved at three times the rate of the national average. The success of the GMC is inspiring other systems to adopt similar strategies. These include Wales and also now the Scottish Attainment Challenge.

Source: Ainscow, M. (2015), Towards Self-improving School Systems, Routledge, London.

As Scotland's bold curriculum becomes truly excellent, its accountability and improvement processes should resemble high-performing systems in Europe and North America such as Finland, Estonia, the Netherlands, and Alberta, Canada. Scotland might benefit from collaboration with Norway and Sweden who are also building stronger cooperation and collective responsibility among groups of municipalities, to share and monitor their different strategies of leading from the middle. Leading from the middle is not about lack of accountability. Rather, it combines a transparent evidence base about outcomes and performance with the lateral, professional accountability that is characteristic of high-performing systems (Elmore, 2007; Darling-Hammond et al., 2014).

Leading *in the middle* in relation to CfE is characterised by careful partnership- and consensus-building to develop CfE authentically at a sustainable rate. It is now time to capitalise on these considerable efforts that have been patiently invested in developing CfE. High-trust systems should be able to act with relatively high speed, because time does not have to be lost with examining people's motives or trying to repair poor relationships. CfE has taken a decade to build trust and consensus. The local authorities and other partners should now be able and ready to respond to the current context of educational inequity with greater speed and agility. This again fits with our delineation in Chapter 3 of the CfE watershed ideally being one of "take-off point".

Leading *from the middle* pushes collaborative and collegial working even further when different organisations take responsibility to drive improvements and innovations on behalf of the rest of the system and when they take on transparent responsibility for improved results. In Ontario, the school districts were funded to work together to lead and not merely implement the inclusive special education strategy within broad Ministry of Education guidelines (see Box 3.3). The teachers' unions took (funded) responsibility for working with the Ministry to develop and disseminate teacher-designed innovations in the Teacher Leadership and Learning Project. The principals' organisations took the leading role in the Student Success strategy. Meanwhile, the central government directly led the literacy strategy – indicating that the Centre has a direct and driving role in some aspects of improvement alongside the organisations that are leading from the middle.

This is a good moment to lead CfE from the middle in creating coherence and collective responsibility for implementation and results through local authorities, as well as through networks driven by professional associations and principal-driven collaborations. There are different kinds of organisations and associations which can lead from the middle, and not only local authorities [Fullan and Rincon-Gallardo, (forthcoming)]. These organisations and associations might take on leadership in specific areas such as literacy, mathematics, ICT, special education inclusion, assessment for learning, and high-impact professional collaboration.

Central government's role in this kind of work can be seen as steering and supporting change rather than driving it – establishing the vision, articulating the narrative, setting expectations, supporting and financing those priorities that are to be led from the middle, reallocating funding for these purposes, and insisting on collective responsibility, professional accountability and shared transparency for involvement and results.

“Leading from the middle” does not preclude leadership from either the bottom or the top. It is important, in this sense, that the local authorities do not become fiefdoms, in which leaders at this level create consensus among themselves but then exert top-down regulation on their own schools, principals and teachers. Such top-down leadership by those in the middle can easily stifle the circulation of ideas and the emergence of new practices. There must also be ways and resources for teachers' and head teachers' organisations and for networks of schools to lead their own improvements across local authorities as well as within and through them to increase coherence and stimulate the circulation of practices and ideas.

Developing and maintaining leadership expertise and capacity

School leadership is a vital part of equity and excellence in education. It is second only to the quality of a school's teachers as within-school influence on educational quality and outcomes (Robinson, 2011). The most important responsibility of a school leader is *leadership for learning*. This means:

- Maintaining a school's focus firmly on pupil learning and its improvement.
- Promoting and enabling teachers' professional learning.
- Supporting organisational learning by empowering the school's professional body and the wider community to collaborate effectively together.
- Paying attention to one's own learning as a leader of the school.

Head teachers, like educators in general, are highly regarded in Scottish culture. Especially in rural environments, head teachers are not only leaders in their schools but also leaders within their communities. In general, being a head teacher is seen as an attractive and rewarding career. As in many other systems, however, head teachers are finding it increasingly hard to maintain the necessary degree of focus on professional and pupil learning as they take on more executive and child service responsibilities, in ways that negatively impact educational quality and the attractiveness of headship. An ADES survey of 22 local authorities found that between January 2011 and April 2013 more than a quarter of the 436 head teacher vacancies had to be re-advertised and in 122 cases, no appointment was made. Recruitment challenges are likely to continue in years to come as in 2012, approximately half the primary head teachers were over 50 years of age, as were 263 secondary head teachers.

Head teachers are appointed and then assigned to schools by local authorities. Local authorities largely develop their own job specifications, local responsibilities, preparation and professional development for head teachers. Denominational schools and their Diocese have their own appointment procedures. Most successful applicants for headship have Scottish Headship qualifications. A Masters-level qualification for headship has been universally available since August 2015, with the intention that it becomes mandatory from 2018/19. Especially in a period of budget constraints, advertising for posts is mainly internal to each authority.

Systems become stronger when school leaders can and do collaborate together and have a strong sense of shared professional identity. Currently, the actions, interactions and appointments of school leaders are largely concentrated on and in their own local authorities. This maintains a focus on the needs of the local community, which has sometimes been difficult to maintain in other systems in which local authorities have been weakened or eliminated in favour of greater school autonomy. At the same time, with globalisation and the flow of information and ideas, the confinement of head teachers' work and opportunities to the same local authority may restrict career mobility and reduce the flow of leadership ideas and experience. It may also inhibit innovation and risk-taking where this might challenge senior administration in some authorities.

Possible responses to the challenge of retaining the community-focused strength of school leadership without entailing risk-aversion or lack of mobility include:

- *Strengthen the professional associations for head teachers and deputy head teachers* representing school leaders' interests and professional learning opportunities.
- *Expand the number of leadership positions of school clusters* so that they are found not only in rural areas where schools are often small but also in high-needs areas where schools can be clustered together for improvement purposes. A cluster leader strategy also creates intermediary positions of leadership, influence, recognition and reward within local authorities so that leadership is distributed more systematically. The ADES study also recommended grouping primary schools together under a leadership team.
- *Provide more incentives and support for mobility of school leaders* across local authorities through national advertising strategies, collaborative projects and professional learning opportunities for leaders beyond their own local authorities, and incentive packages to support travel and relocation movement between authorities (already available in many authorities but could be system-wide).
- *Develop succession strategies* across local authorities and not only within them, so that authorities develop leaders for each other. The ADES report recommended that strategies such as inter-authority talent spotting, fast-tracking and job-shadowing may be especially advantageous in a climate of austerity.

One way to establish greater coherence in school leadership has been by including a Standard for Leadership and Management in the GTCS's framework of professional standards. This standard addresses leadership for learning issues such as ensuring consistent, high quality teaching and learning, and developing staff capability. Consideration could now be given to extending this to increase consistency of quality across schools to the effect: *Initiate and engage in collaborative work with other schools within and outside the local authority to spread innovation, extend impact and increase collective responsibility for quality and equity.*

A major strategy for developing greater coherence in educational leadership has been the creation of the Scottish College for Education Leadership (SCEL). *Teaching Scotland's Future* made a recommendation “to establish a college of educational leadership”. Informed by the experience of system-wide leadership colleges and councils in Ontario, England and Australia, SCEL was created in 2014 to develop leadership programmes, guiding frameworks and other initiatives. SCEL is intended to help present and future leaders to make a difference to the outcomes for children and young people. As recently as September 2015, SCEL launched a Framework for Educational Leadership that encourages self-evaluation and reflection along with research-based models of learning-centred leadership.

SCEL aims to make leadership development opportunities more coherent across Scotland, to initiate innovative leadership development work of its own, and to “embed ‘leadership networks’ across the sectors and systems so that leaders at all levels are connected to and within professional leadership communities in education and the public sector” (SCEL, 2014). SCEL’s work has only just started and it is too early to assess its progress and impact. It has deliberately started on a modest scale unlike England’s National College for School Leadership and, in line with many high-performing organisations, is being developed at a rate that is viewed as sustainable (Hargreaves and Harris, 2014).

Summary of key points

- Many of the Scottish educators we talked to are passionately committed to CfE, using words like “a transformation of children’s experience”, or “a breath of fresh air”. All the learners we met were able to speak confidently about their learning, their aspirations, and the extent to which they were engaged in school. As CfE seems to be increasing student engagement, more metrics could be developed and used to communicate this success to the wider public.
- However visionary any curriculum is in principle, this makes little difference unless it is successfully implemented in practice. Many of the best curriculum designs have failed in practice to spread beyond a few innovative sites or have been badly implemented with only superficial fidelity to the original philosophy.
- A major challenge is to stay bold and to build on what has already been accomplished in a way that is as persuasive to the public as it is to the profession, and that can achieve greater equity sooner than later. CfE has taken a decade to build trust and consensus so that the local authorities and other partners should now be able and ready to respond with speed and agility.
- Primary schools have made more progress with whole-school, topic-based and project-based interdisciplinary approaches than secondary schools, as suggested by research and largely confirmed by the system-level respondents.
- We see the value of a strong drive to innovate learning environments in secondary schools in disadvantaged areas. This will call for leadership to be exercised at every level, and include young people and the close involvement of the communities and families involved. We suggest the strong engagement of the Scottish research community – in design, evaluation, and preparation of materials for wider diffusion.
- There is encouragement for and movement towards a stronger teaching profession in Scotland. Investment in teachers’ professional capital has three components: human

capital, which is the individual qualities and capabilities of teachers; decisional capital, which is the development of judgment and expertise over time; and social capital which is about collective efficacy, collaboration, and collective responsibility.

- There are many opportunities for teachers to engage in professional learning, including online. Scotland’s relatively flat career structure for teachers, on the other hand, is not typical of higher performing countries.
- The deliberate development of decisional capital has a positive impact on student learning over time through building strong self-efficacy. Teacher leadership entails initiating improvement and innovation practices within and beyond their schools; it develops teachers’ competence and confidence as educators, advances their professional learning, promotes change and improvement in schools, encourages professional collaboration and collegiality, and boosts professional status and recognition.
- There is strong evidence of considerable social capital among Scottish educators who collaborate together through collective working for improvement of professional practice. There should now be a clearer drive to define, distinguish and drive the particular forms of social capital or teacher collaboration that have the greatest benefit for pupils’ learning.
- A major strategy for developing greater coherence in educational leadership has been the creation of the Scottish College for Education Leadership (SCEL). This is a good moment to lead CfE not only “in the middle” but “from the middle”, helping to create coherence and collective responsibility for implementation and results.
- School leadership is a vital part of equity and excellence in education. It is second only to the quality of a school’s teachers as within-school influence on educational quality and outcomes. The most important responsibility of school leadership is leadership for *learning*.

Recommendations

Focus on the quality of implementation of CfE in schools and communities, and make this an evaluation priority

No matter how well designed a curriculum may be, this makes little difference unless it is successfully implemented in practice. This calls for full engagement from schools and teachers who are clear about direction and who work closely with learners, families, and communities. It calls for a strong role for the “middle”, covering such organisations as local authorities, teachers’ and head teachers’ associations, and different networks and collaboratives, that each have prime responsibility for implementing certain aspects of CfE (“leadership from the middle” and echoing recommendations in Chapter 3). A priority area for evaluation is to follow closely how CfE is being implemented on the ground - across the board and not only in exemplary sites. This evaluative knowledge should feed back into policy and practice to ensure that CfE rests on an evidence base that can make it still stronger.

Develop targeted, networked, evaluated innovation in secondary school learning environments to enhance engagement

The ultimate location of quality and change – which all other reforms are seeking to influence – is teaching and learning, in classrooms and out-of-school settings. Learner engagement is a prerequisite of powerful learning and improved outcomes. We suggest consideration of a parallel to the Scottish Attainment Challenge, focused on innovating learning environments in secondary schools in areas with the highest deprivation levels. This is not as an alternative to laying foundations in the early years but to ensure that such foundations can be capitalised on through stimulating and challenging learning environments when students reach secondary school. We also suggest the strong engagement of the Scottish research community in contributing to design, evaluation, and preparation of materials for wider diffusion (and see the lessons derived from work in deprived areas to have long-term benefits across the system as a whole).

Develop a coherent strategy for building teacher and leadership social capital

Teachers who work in cultures of professional collaboration have a stronger impact on student achievement, are more open to change and improvement, and develop a greater sense of self-efficacy than teachers who work in cultures of individualism and isolation. Not all kinds of professional collaboration are equally effective. We suggest that collaboration in improving teaching, assessing CfE, and connecting schools to take collective responsibility for each other's improvement and results, should be top priorities. In line with current commitments of the Scottish College of Education Leadership, the Standards Frameworks could emphasise even more the importance of and expectations for collaborative professionalism and leadership.

References

- Ainscow, M. (2015), *Towards Self-Improving School Systems*, Routledge, London.
- Anderson, S. (2009), "Moving change: evolutionary perspectives on educational change", in A. Hargreaves, et al, *Second International Handbook of Educational Change*, Dordrecht, Springer, pp 65-84.
- Ashton, P. T., and R.B. Webb. (1986), *Making a Difference: Teachers' Sense of Efficacy and Student Achievement*, New York, NY, Longman.
- Bandura, A. (1995), "Exercise of personal and collective efficacy in changing societies", Cambridge University Press, pp 1-45, *Self-efficacy in Changing Societies*, online publication 2010, <http://dx.doi.org/10.1017/CBO9780511527692>.
- Bryk, A. et al. (2015), *Learning to Improve: How America's Schools Can Get Better at Getting Better*, Harvard Educational Press, Cambridge, MA.
- Callahan, R (1962), *Education and the Cult of Efficiency*, University of Chicago Press, Chicago.
- Campbell, C., A. Lieberman, and A. Yashkina with N. Carrier, S. Malik and J. Sohn (2014), *The Teacher Learning and Leadership Program: Research report 2013-14*, Toronto, Ontario Teachers' Federation.
- Chapman, C. and D. Muijs (2013), "Collaborative school turnaround: a study of the impact of school federations on student outcome", *Leadership and Policy in Schools*, Vol. 12/3, pp. 200-226.
- Darling-Hammond, L., G. Wilhoit, and L. Pittenger (2014), "Accountability for college and career readiness: developing a new paradigm", *Education Policy Analysis Archives*, Vol. 22/86.
- Day, C., P. Sammons, and G. Stobart (2007), *Teachers Matter: Connecting Work, Lives And Effectiveness*, McGraw-Hill Education, United Kingdom.
- Donaldson, G. (2011), *Teaching Scotland's Future - Report of a Review of Teacher Education in Scotland*, The Scottish Government, Edinburgh.
- Dumont, H., D. Istance, and F. Benavides (eds.) (2010), *The Nature of Learning: Using Research to Inspire Practice*, Paris, OECD Publishing, <http://dx.doi.org/10.1787/9789264086487-en>.
- Education Scotland (2015), *3-18 Literacy and English Review*, www.educationscotland.gov.uk/Images/3to18LiteracyandEnglishReview_tcm4-856583.pdf

- Elmore, R. F. (2007), *School Reform from The Inside Out: Policy, Practice, and Performance*, Harvard Educational Press, Cambridge, MA.
- Elmore, R., and D. Burney (1997), *Investing in Teacher Learning: Staff Development and Instructional improvement in Community School District #2, New York City, New York, NY*, Consortium for Policy Research in Education (CPRE), Teachers College, Columbia University.
- Fullan, M. (2001), *The New Meaning of Educational Change*. (3rd ed.), Teachers College Press, New York, NY.
- Fullan, M., and S. Rincon-Gallardo, (forthcoming). "Essential features of effective networks in education", *Journal of Professional Capital and Community*, Vol. 1/1.
- Goddard, R. D. (2001), "Collective efficacy: A neglected construct in the study of schools and student achievement", *Journal of Educational Psychology*, Vol. 93/3, Sept. pp. 467-476.
- Gross, N., J.B. Giacuinta, and M. Bernstein (1971), *Implementing Organizational Innovations: A Sociological Analysis of Planned Change*, Basic Books, NY.
- Hargreaves, A., and M. Ainscow (2015). "The top and bottom of leadership and change", *Phi Delta Kappan*, Vol. 97/3, pp. 42-48.
- Hargreaves, A. (2014), "Large-Scale reform in literacy and math: rethinking strategy in the light of international evidence"; *Journal of Reading Recovery*, Fall, pp 27-35.
- Hargreaves, A., A. Boyle and A. Harris, (2014), *Uplifting Leadership: How Organizations, Teams, and Communities Raise Performance*, Jossey-Bass, San Francisco, CA.
- Hargreaves, A. and M. Fullan (2012), *Professional Capital: Transforming Teaching in Every School*, Teachers College Press, New York.
- Hargreaves, A. and D. Shirley (2012), *The Global Fourth Way: The Quest for Educational Excellence*, Corwin Press, Thousand Oaks, CA.
- Hargreaves, A., G. Halász and B. Pont (2008), "The Finnish approach to system leadership", in OECD and SSAT, *Improving School Leadership, Volume 2: Case Studies on System Leadership*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264039551-5-en>
- Hargreaves et al, (2000), *Change Frames: Supporting Secondary Teachers in Interpreting and Integrating Secondary School Reform*, Ontario Institute for Studies in Education/University of Toronto, Toronto.
- Harris, A. (2008), *Distributed School Leadership: Developing Tomorrow's Leaders*, Routledge, New York, NY.
- Hoyle, E. (1974), 'Professionalism, professionalism and control in teaching', *London Educational Review*, Vol. 3/2, Summer 1974, pp. 13-19
- Leana, C. (2011), "The missing link in school reform", *Stanford Social Innovation Review*, Leland Stanford Jr. University.
- Lieberman, A. and L. Miller (2011), *Teacher Leadership*, John Wiley and Sons, San Francisco.
- Lortie, D. (1975), *School Teacher*, University of Chicago Press Books.

- Markow, D., L. Macia, H. Lee, (2013), *The Metlife Survey of the American Teacher, Challenges for School Leadership, A Survey of Teachers and Principals*, conducted for Metlife Inc.
- Minty, S., and M. Priestley, (2012). *Developing Curriculum for Excellence: Summary of research findings from a Scottish local authority*. Stirling: University of Stirling.
- Newmann, F. M., and G. G. Wehlage, (1995), *Successful School Restructuring: A Report to the Public and Educators*, American Federation of Teachers and Center on Organization and Restructuring of Schools, University of Wisconsin-Madison.
- OECD (2015a), *Education Policy Outlook 2015: Making Reforms Happen*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264225442-en>
- OECD (2015b), *Schooling Redesign: Towards Innovative Learning Systems*, Educational Research and Innovation, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264245914-en>.
- OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, TALIS, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264196261-en>
- OECD (2014a), *Improving schools in Wales: An OECD perspective*, OECD Publishing, Paris.
- OECD (2013), "What It Takes to Learn", in OECD, *PISA 2012 Results: Ready to Learn (Volume III): Students' Engagement, Drive and Self-Beliefs*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264201170-5-en>
- OECD (2012), *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264130852-en>
- OECD (2011a), *Lessons from PISA for the United States, Strong Performers and Successful Reformers in Education*, OECD Publishing, <http://dx.doi.org/10.1787/9789264096660-en>.
- OECD (2011b), *Building a High-Quality Teaching Profession: Lessons from around the World*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264113046-en>.
- Priestley, M. (2013). "The 3-18 Curriculum in Scottish Education", in T.G.K. Bryce and W.M. Humes (eds.), *Scottish Education, 4th edition*, Referendum, Edinburgh: Edinburgh University Press.
- Priestley, M. and S. Minty (2013), "Curriculum for Excellence: 'A brilliant idea, but. . .'", *Scottish Educational Review*, Vol.45/1, pp. 39-52.
- Robinson, V. M. (2011), *Student-centered Leadership*, Jossey-Bass, San Francisco, CA.
- Rosenholtz, S.J. (1989), *Teachers' Workplace: The Social Organization of Schools*, Longman, New York.
- Sahlberg, P. (2014), *Finnish Lessons 2.0: What Can the World Learn from Educational Change In Finland?*, Teachers College Press, New York, NY.
- Schleicher, A. (2015), *Schools for 21st-Century Learners: Strong Leaders, Confident Teachers, Innovative Approaches*, *International Summit on the Teaching Profession*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264231191-en>.

Scottish College for Educational Leadership, (2014), *Leadership Development*, www.scelscotland.org.uk/leadershipdevelopment/index.asp

Scottish Government (2011) *Advancing Professionalism in Teaching, The Report of the Review of Teacher Employment in Scotland (The McCormac Report)*, Scottish Government, Edinburgh.

Scottish Executive Education Department (2000), *A Teaching Profession for the 21st Century: Report of the Committee of Inquiry into Professional Conditions of Service for Teachers* (The McCrone Report). Edinburgh, Scottish Government. www.gov.scot/Resource/Doc/158413/0042924.pdf (accessed on 25 September 2015)

Spillane, J. P. (2006), *Distributed Leadership*, Jossey-Bass, San Francisco, CA.

Tschannen-Moran, M. and M. Barr (2004), ‘‘Fostering student achievement: The relationship between collective teacher efficacy and student achievement’’, *Leadership and Policy in Schools*, Vol. 3, pp. 187-207.

UNICEF (The United Nations International Children's Fund) Office of Research (2013). ‘‘Child Well-being in Rich Countries: A comparative overview’’, *Innocenti Report Card 11*, UNICEF Office of Research, Florence.

Chapter Five

Assessment, evaluation and the “curriculum for excellence”

This chapter turns to the key areas of assessment and evaluation. It argues the need for an organising framework in order to develop articulation and coherence of approaches and applies this in structuring the chapter. It overlays this on top of three main sections: a summary of the main arrangements for assessment and evaluation in Scotland; a selection of key insights from international research and practice; and, the issues that these give rise to for Scotland in this domain. The chapter concludes with a summary of the key points and the main recommendations. In line with the review as a whole, the coverage is of Broad General Education (BGE) up to the end of S3.

Main assessment and evaluation arrangements in Scotland

Scotland was one of the first countries to initiate a nation-wide assessment system based on the principles of assessment for learning following the publication of the seminal work by Black and Wiliam (Black and Wiliam, 1998). This work preceded the introduction of *Curriculum for Excellence* (CfE) with the aim of building a national assessment system integrating assessment for, as and of learning (Hayward and Spencer, 2010; Hutchinson and Hayward, 2005). Hayward has identified the innovative features on which the system was originally based (Hayward, 2015).

- It was designed using research both on assessment and on transformational change with a common aspiration among researchers, policy-makers and practitioners to improve learning for all of Scotland's young people.
- It was a collaborative process bringing the relevant communities across the system to identify and tackle assessment-related issues – consistent with Scotland's emphasis on developing consensus rather than achieving change through legislation.
- Evaluation processes were designed to inform future action.

With the introduction of CfE, assessment became a part of the curriculum – in effect bringing together assessment, curriculum and pedagogy to promote the idea that assessment is essentially part of, and not separate from, learning and teaching. This holistic approach stood in sharp contrast to the previous system of national assessments throughout primary and lower secondary schooling. The formative assessment emphasis, with its range of ways to collect information, was designed to support learning.

Other parts of the assessment and evaluation system have been designed to complement this formative focus. The developmental emphasis of teacher appraisal and school self-evaluation came together into a coherent whole. Light sampling of learners in literacy and numeracy for national monitoring purposes kept the focus on assessing progress for improvement purposes rather than for strong accountability. In the following sections, further details are provided on how Scotland has approached assessment and evaluation in different aspects of the education system. The newly-published proposals for a National Improvement Framework, referred to later in this chapter, if implemented promise to open a new phase in the approach to assessment; we shall argue how important it will be to maintain a dual focus both on maintaining the strong formative function while improving evidence on learner outcomes and progression.

Learner assessment

Considerable attention has been given to assessment issues since the integration of assessment into the CfE. For example, a coherent rationale and framework for classroom assessment was provided to schools through an early publication in the *Building the Curriculum* series ("a framework for assessment") (Education Scotland, 2010). This framework outlines the importance of connecting assessment to the values and principles of *Curriculum for Excellence* and provides a strong rationale for assessment through a statement of the purposes of assessment including:

- To support learning that develops the knowledge and understanding, skills, attributes and capabilities which contribute to the four capacities.

- To give assurance to parents, learners themselves, and others, that children and young people are progressing in their learning and developing in line with expectations.
- To provide a summary of what learners have achieved, including through qualifications and awards.
- To contribute to planning the next stages of learning and to help learners progress to further education, higher education and employment.
- To inform future improvements in teaching and learning. (*Education Scotland*, 2007, 2010).

This document outlines what to assess, why we assess, when we assess, how we assess, ways to ensure quality and confidence in assessment, reporting on progress and achievement, and informing self-evaluation for improvement.

Not surprisingly with such a potentially radical reform in the assessment and evaluation space, some challenges have appeared in relation to the assessment of learners. Not least among them has been making sound assessment decisions given the detail of the Experiences and Outcomes in CfE. *Education Scotland* has sought to address these challenges through professional support and publications based on the ideals of a responsive formative assessment process consistent with the broad principles of CfE.

An example of professional support to teachers and schools to optimise the effective implementation of assessment within the CfE is outlined in the document, "*Curriculum for Excellence implementation priorities 2011- 2012*" (*Education Scotland*, no date). This gave priority to improving assessment with the purpose expressed as, "develop practitioners' skills and confidence in assessment approaches for Curriculum for Excellence in particular quality assurance and moderation; reporting and profiling" (*Education Scotland*, n.d., :1).

One of the persistent concerns that has been identified over several years relates to:

... the danger that focusing on tracking individual Es and Os will lead to a fragmentation of learning and insufficient emphasis on the depth of learning related to application and challenge. It might also result in a lack of focus on how learning relates to the 'big picture' of progression within and through levels. (*Education Scotland*, 2014: 3)

This concern has been addressed in a number of different publications by *Education Scotland*. A good example is *Assessing progress and achievement of levels in the 3-15 Broad General Education*. The overview document in this series reiterates Scotland's approach to assessment including the importance of learners participating in the process of planning for learning and assessment, using a range of assessment approaches and a variety of evidence to moderate and make judgements on progress and reiterating that the main purpose of assessment is to provide feedback and inform next steps. It also seeks to assist teachers to identify significant aspects of learning to guide teachers' assessment practice:

The significant aspects of learning bring together a coherent body of knowledge and understanding and related skills as detailed within the experiences and outcomes. These significant aspects of learning refer to the core learning against which learners' progress can be compared periodically. (*Education Scotland*, n.d.: 2)

In each curriculum area, the different documents and the main Experiences and Outcomes (Es and Os) documentation give:

- A description of the significant aspects of learning within that area of the curriculum.
- An outline of what breadth, challenge and application look like within that area of the curriculum.
- Information on planning for progression through curriculum levels, using breadth, challenge and application.
- Information on monitoring and tracking progress and achievement in that area of the curriculum.
- A progression framework for many of these areas of the curriculum which describes progression within the significant aspects of learning.
- Exemplification of learner work, annotated by practitioners, which demonstrates the achievement of a level in each area of the curriculum or in a component. (Education Scotland, n. d. :1)

Further updates have been provided through additional publications, such as *Monitoring and Tracking Progress and Achievement in the Broad General Education* (Education Scotland, 2014). This paper outlines the importance of maintaining a learning purpose for monitoring and tracking and ensuring the evidence comes primarily from day-to-day learning and teaching, and is fit-for-purpose with an emphasis on dialogue and observations. It emphasises the importance of making assessment manageable and sustainable. More recently *Education Scotland's News: Focus on making good assessment decisions* (Education Scotland, 2015) outlines processes for making good assessment decisions.

The on-line National Assessment Resource (www.narscotland.org.uk) has also been updated, thus helping to create a dynamic classroom assessment environment for learners, teachers and school leaders.

School evaluation

With the formation of *Education Scotland* came responsibility for school inspection that had previously been undertaken by HM Inspectorate of Education. The approach to school inspection is consistent with the formative approach to learner assessment, in that it focuses on each school's self-evaluation processes. Schools' self-evaluation and the work of the inspectors are supported by well-considered indicators identified in the document, "*How good is our school?*" (HM Inspectorate of Education, 2007). Quality indicators are grouped under the headings *Successes and achievements*, *Work and life of the school* and *Vision and leadership*. Indicators for success and achievements, for example, include *Improvements in performance* and *Fulfilment of statutory duties*. These indicators are further broken down into themes.

Each of the headings has questions designed to prompt each school's self-evaluation that is then used as the basis of the inspection review. Questions include: *What outcomes have we achieved?*, *How well do we meet the needs of our school community?*, *How good is the education we provide?* *How good is our management?* and *How good is our leadership?* (p.14)

A range of evidence is expected to be brought to answering these questions with suggestions to include what is observed, the views of people who are closely involved with the school, including children and young people themselves, parents, partner agencies and staff, together with quantitative data.

Although the main indicators have remained in place since 2007, they have been reviewed on a regular basis. For example, the *Inspection Advice Note 2014-15* (June, 2014) provides an update on expectations with respect to assessment and attainment in response to feedback from the sector. This advice note continues to support the implementation of the broad curriculum, places an emphasis on raising standards and monitoring impact, underlines the importance of professional dialogue both within and across schools, and responds to concerns about assessment overload.

Local authorities may also volunteer to engage schools in a process of validated self-evaluation, "led by the local authority and involves a partnership in which *Education Scotland* works alongside the authority and applies its knowledge of educational delivery and expertise in evaluation." (Scottish Government, 2015a Appendix 8). We discussed this process during school visits as part of our review, highly praised by participating schools through offering a process of clusters of schools sharing practice, learning walk routines, and moderation of the self-evaluation and becoming used to opening school doors to counterparts in nearby cluster schools (an example of strengthening the middle we have emphasised in the foregoing chapters).

The Background Report (Scottish Government, 2015a: Appendix 8) notes that for early learning and childcare, "... overall inspection evidence for 2013-14 showed that 67% of evaluations are good or above and 90% are satisfactory and above. (p. 136) This document also reports that around half of the primary schools demonstrated very good and excellent practice over the period September-December 2014 and all secondary schools were evaluated as satisfactory or better over the same period. We noted in Chapter 2, however, that *Education Scotland* inspection reports gave as many as one in five schools a "satisfactory" evaluation in inspections, and a smaller but non-trivial share (6% of early learning centres and 10% of schools) are judged to be offering only weak or unsatisfactory provision, on the five quality indicators.

Across all sectors, strengths appeared to be in the area of positive attitudes, engagement and motivation, partnerships outside the school, supportive ethos and teamwork. Areas in need of development common to all sectors were effective use of assessment information to support children's progress in their learning, and development of the curriculum, including learning and teaching. Hence, *Education Scotland* has identified the primary areas where more work and improvement are needed to be exactly those at the core of the successful implementation of CfE – the development of curriculum and the effective use of assessment information to support children's learning and progress. This suggests that CfE has still to be fully integrated into the daily practice of schools.

Professional standards and appraisal processes

The professional standards and appraisal approaches for Scotland's teachers and leaders are consistent with the strong developmental focus to build professional capital. The teacher standards are designed to promote career-long professional learning and support the development of professional knowledge and skills and are intended to be developmental, aspirational and to serve a self-review function with questions designed

for personal reflection (General Teaching Council of Scotland, 2012) Professional values form the core of the standards, with a strong commitment to social justice.

Underpinning the Standard for Career-Long Professional Learning are the core principles of practitioner enquiry. In practice, this involves teachers having an enquiring disposition at the core of their professional practice. This means thinking critically and questioning their own educational beliefs, assumptions, values and practices. They will create knowledge to enhance, progress and lead the learning experiences of all their learners and work collaboratively with colleagues. The teacher as an adaptive expert is open to change and engages with new and emerging ideas about teaching and learning within the ever-evolving curricular and pedagogical contexts in which teaching and learning takes place.

Similarly, the purpose of the professional standards for leadership and management are strongly developmental and designed to support school self-evaluation. The standards describe what is expected of middle leaders and head teachers in the areas of professional values and personal commitment, professional knowledge and understanding, professional skills and abilities, professional actions and strategic vision. They are strongly relationship, culture and process focused rather than specifically outcomes focused. For example, the standard most closely related to teaching and learning, Standard 4.3, with “4.3.1 Head Teachers build a shared vision to support the improvement of teaching and learning and set consistently high expectations for all in the school community and improvements in teacher professional practice.” The professional learning standards are similarly culture and process focused and include Standard 4.2.2 which reads, “Head Teachers establish and promote collaborative practice to support a culture of learning within and beyond the school” and Standard 4.2.5 is summarised as “Head Teachers build systems to monitor the impact of professional learning on the culture of learning.”

Local authorities

The Scottish government has not required local authorities to gather and submit data on levels of achievement since 2003, with the intention of giving greater weight to professional judgements consistent with CfE and assessment for learning principles. The role and expectations for local authorities in relation to pupil assessment is described in the document, *Assessment for Curriculum for Excellence: Strategic Vision Key Principles* (Scottish Government, no date)

External moderation will focus on the judgements teachers make and on moderation practices. Education authorities will have a key role in ensuring that schools have suitable arrangements in place to support teachers' judgements and focus on any action required for improvement. (p. 5)

Local authorities have sought to support teachers' judgements in assessment in a variety of ways, with many emphasising collaboration across transitions. In addition, nearly all local authorities have continued to assess learners using a variety of standardised assessments as part of their quality assurance processes within the authority. That each of the local authorities operates with its own form of assessment, both the efforts in establishing separate approaches and the limits this sets on pulling together a collaborative picture and process, are issues we return to later in this chapter.

System level

Education Scotland is responsible for national monitoring of both the implementation and impact of CfE. It has a well-developed analytics section and uses a number of sources of evidence for monitoring purposes. The primary data source on attainment is light sampling through the Scottish Survey of Literacy and Numeracy at P4, P7 and S2. These tests provide evidence of pupil progress on two important skill areas underpinning CfE.

Education Scotland has information on youth awards from some local authorities which signals the importance it gives to the wider capacities of CfE. As noted in the section on school evaluation, it identifies themes for consideration from inspection reports on strengths and weaknesses evident in inspections. An important data source is feedback from the various stakeholder committees established as part of CfE and identified in Chapter 3. Scotland also participates in international surveys, such as PISA for international benchmarking purposes.

As noted in earlier sections, *Education Scotland* has been responsive to monitoring information and providing guidance through reports and professional development initiatives.

Research, evaluation and independent agencies

Some in the evaluation and research community have influenced the development of CfE by being involved in advisory groups, undertaking commissioned research and writing academic papers and books. *Education Scotland* regularly commissions reviews of the literature (e.g. Chapman, Hall, Lowden and Watters, 2015; Hayward, et al., 2012) on areas relevant to CfE implementation with key ideas sometimes trialled in a small number of schools under the guidance of the research team. Recently, the Robert Owen Centre for Educational Change has been set up at the University of Glasgow which aims to promote more equitable education systems, undertaking high quality research that blurs the boundaries and strengthens the connection between research, policy and practice. A meeting of the university deans with the review team indicated that all had information about CfE on their websites.

There does not appear to be any large scale research or evaluation projects by either the universities or independent agencies with specific responsibility to provide advice to Education Scotland on what is working well in the years of the Broad General Education and what areas need to be addressed. Rather, independent evaluation and feedback is provided through direct contact with schools, sector and interest group forums and information from local authorities. The analytics section of *Education Scotland* provides evidence from within the system itself. This is an issue we believe deserves reflection and consideration of more active partnerships with the research community.

International trends in assessment and evaluation

Most education systems are emphasising an increasingly strategic role for comprehensive assessment and evaluation systems and frameworks that encompass learners, teachers, school leaders, parents, local authorities and system-wide education authorities. Their primary purpose is to understand how well each level of the system is creating synergies for better student, professional and system learning (OECD, 2013). High quality information about the progress and achievement of learners on a nation's priority goals forms the "backbone" of the framework. From this strong evidence base,

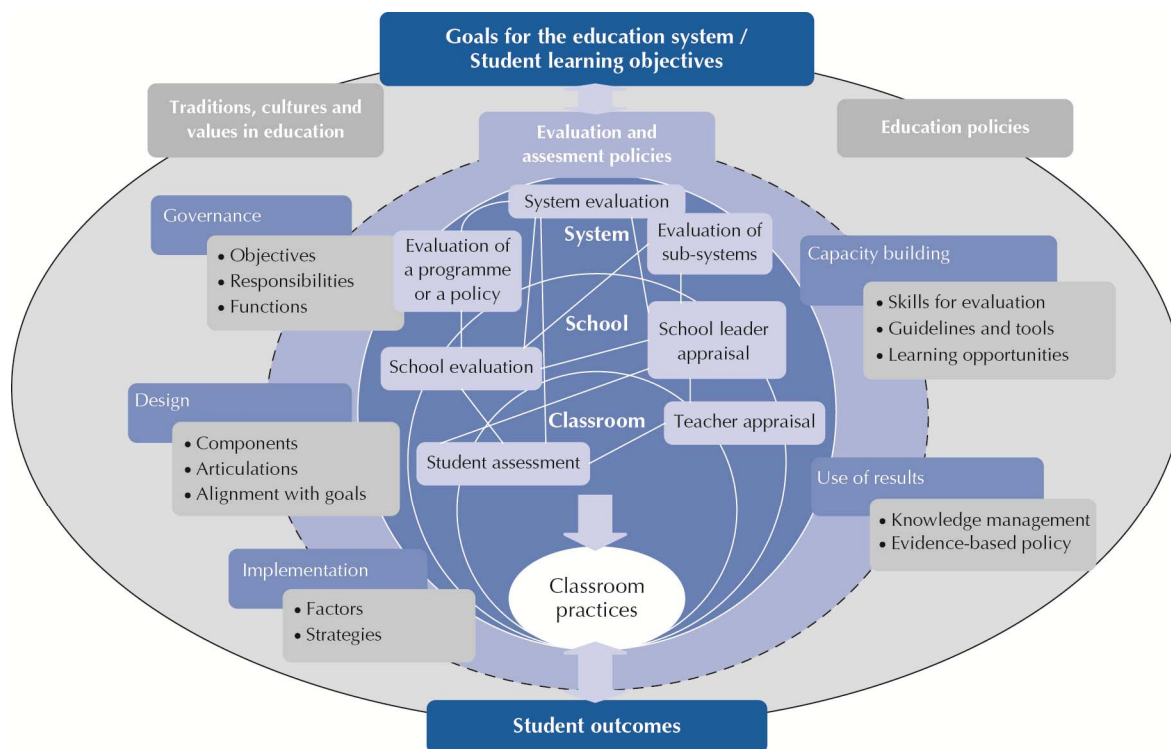
systems for school evaluation, professional appraisal, and system evaluation are developed.

Past and current international practices of devising separate assessment and evaluation systems for some parts of the education system without considering their impact on the other parts of the system are no longer tenable, because there is increasing evidence that what is collected for one system purpose influences the practices and outcomes in other parts of the system (OECD, 2013). This means that developing such a framework is a complex and challenging task because there are inevitable tensions. In essence, the main tensions revolve around potentially contradictory purposes for collecting the evidence, the importance attributed to it at any one level of the system, and possible distortions that may result. The OECD has provided an overview of how the holistic approach to a framework can be approached in practice when encompassing system, school and classroom assessment practices (see Figure 5.1).

Both developmental and accountability purposes are inherent in any assessment and evaluation framework, such as that illustrated in Figure 5.1. Many education jurisdictions have sought to resolve the tension this brings through developing parallel assessment systems: one that emphasises formative purposes to inform teaching and learning, with another that allows for relatively easy aggregation of data to make judgements about quality of provision by a school or an educational jurisdiction. This latter purpose is usually met by some kinds of standardised test or benchmarking of learners' progress and achievement. The tension that arises under these circumstances is that the latter sources of assessment evidence may come to be seen as having greater importance than the former, particularly under circumstances that bring strong accountability pressures to bear. Under these circumstances, teaching and learning activities become focused on what is assessed. It is almost a truism that what gets assessed is what gets taught and if a system judges teachers and schools largely on the results of standardised tests, it can lead to narrowing the curriculum as they focus on the skills that are tested and give less attention to learners' wider developmental and educational needs (OECD, 2013; Lucas and Claxton, 2010; European Commission, 2011; Pepper, 2011).

Among the most evident examples of these types of distortion occurs where assessment and evaluation frameworks are explicitly driven by externally-derived accountability. The underlying assumption is that such accountabilities will drive up performance because they have associated high stakes.

In general, "high stakes" means that important decisions about learners, teachers, schools, or districts are based on the scores learners achieve on a high-stakes test, and either punishments (sanctions, penalties, reduced funding, negative publicity, not being promoted to the next grade, not being allowed to graduate) or accolades (awards, public celebration, positive publicity, bonuses, grade promotion, diplomas) result from those scores. (Great Schools partnership, 2015)

Figure 5.1 Main features of the overall evaluation and assessment framework

Source: OECD (2013), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, OECD Reviews of Evaluation and Assessment in Education, <http://dx.doi.org/10.1787/9789264190658-en>.

Such strong accountabilities have resulted in the negative consequences outlined and have been condemned as the “wrong system drivers” (Fullan, 2011). The important point is that these tensions and compromises need to be well understood and taken into account when constructing an assessment and evaluation framework to ensure that these kinds of distortions are minimised (Linn, 2000). Those involved need to understand how one use may impact on other uses in all parts of the framework. As the OECD identifies,

Higher-stakes assessment do not have to be at odds with formative assessment, but international research shows that ‘there is a risk that pressures for summative scores may undermine effective formative assessment practices in the classroom ... Such tensions between formative and summative assessment need to be recognised and addressed. (OECD, 2013: 215)

These inherent tensions highlight the importance of having a coherent and carefully designed framework that encompasses all system levels in order to maximise the quality of the information, to ensure that particular evidence sources are fit for the intended purpose, and to minimise unintended consequences (Linn, 2000; OECD, 2013).

Herman and Gribbons (2001) propose that rather than creating a dichotomy between formative inquiry and accountability, accountability should become a process of using evidence to identify priorities for change, to evaluate the impact of the decisions, to understand learners’ academic standing, to establish improvement plans and to monitor progress. This can happen in schools that are focused on professional learning as a continuous and essential responsibility, with accountability becoming a mutual

responsibility to achieve collective aims. This mutual responsibility is what drives professionals in their work as they routinely challenge existing beliefs and practices, and use data to make sense of their environment and to think about their future. But for it to work in ways that ensure high quality and equity, these processes must be based on a strong foundation of evidence so all key players at each layer of the system are able to answer the question, “Are we making enough of a difference?” (Timperley, Kaser and Halbert, 2014). The inclusion of “enough” in this question means that student progress needs to be monitored against some form of benchmarks so that all in the system have confidence in the judgments and can assess their own contribution towards achieving individual and system goals.

Thus, the architecture of an assessment and evaluation framework needs to integrate the purposes for which assessment and evaluation information are collected, ensure the evidence is high quality and fit-for-purpose with a clear line of sight from the experiences and outcomes in learners’ educational environments, to understanding how schools, the professionals working in them, local and national authorities are impacting on the quality of those outcomes. This means integrating processes and systems for learner assessment, teacher and leader appraisal, school evaluation, together with local authority and national activities and policies.

A well-constructed architecture, however, is only as good as the processes in which learners, professionals and other stakeholder engage to achieve agreed goals. This means that the accompanying processes should be driven by norms of collective responsibility and mutual accountability through genuine inquiry into the contributions that each player in the system makes to achieving the outcomes to which everyone is committed.

Considerations for the Scottish education system

Scotland’s assessment and evaluation system for learners, teachers, leaders and schools has clearly articulated frameworks for each of these players with a primarily formative emphasis. This emphasis is strongly supported in the international literature in terms of enhancing student and professional learning (e.g. Black and Wiliam, 1998; Popham, 2011; Timperley, 2011; Wiliam, 2010).

Over time, however, some issues have become apparent, especially relating to the confidence of stakeholders in the evidence base on learner progress and achievement in CfE. Different documentary sources (e.g. Scottish Government, 2015; Hayward et al., 2012) have identified that teachers’ competence in assessment has continued to be a challenge. A common theme noted in the summaries of school inspection reports for the early years and in primary and secondary schools has been the effective use of assessment information to support children’s progress in their learning, and development of the curriculum (Scottish Government, 2015). Interviews during the school visits by the review team revealed a wide range of assessment practices, with some schools and teachers having difficulty in prioritising assessment tasks.

The lack of clarity about what should be assessed in relation to the Experiences and Outcomes in the curriculum contributes to this problem, despite *Education Scotland*’s attempts to identify significant aspects of learning and how to assess them. Some of those interviewed, particularly in secondary schools, expressed the view that this lack of clarity has created the risk that CfE, “comes down to the examinations”. In the minds of these informants, senior school examinations were the only assessments that really counted. The multiple publications produced by *Education Scotland*, some of which are noted in

the first section of this chapter, together with the professional development provided, indicate that mastering this task at the classroom level is not easy and a deeper analysis of the problem is needed if it is to be solved. The solution will lie in some combination of reducing the complexities of the task, amending the curriculum and assessment context in which teachers are being asked to execute the task, and improving the knowledge of teachers and school leaders to undertake it.

The centrality of a robust evidence base on learner progress and achievement to inform all other parts of the system, however, makes this an important issue to address. Schools, for example, are encouraged to bring a range of evidence to their self-evaluation processes. This variety is fundamental to providing a rounded picture, but in the absence of robust evidence about learner progress and achievement as part of the mix, on what basis do school leaders decide if they provide optimal learning opportunities for their learners? Similarly, professional standards and appraisal are appropriately formatively focused, but without strong evidence of learner progress in the mix, how do those involved gauge whether their efforts are making a real difference to learner outcomes on CfE.

The light sampling of literacy and numeracy at the national level has not provided sufficient evidence for other stakeholders to use in their own evaluative activities or for national agencies to identify with confidence the areas of strength in the years of the Broad General Education across the four capacities of CfE. Nor has it allowed identification of those aspects or localities where intervention might be needed. Local authorities have sought to fill this space with their own assessments. Nearly all LAs, for example, have introduced frequent formal testing of learners on standardised tests that are not specifically designed to align with the Experiences and Outcomes of CfE (Audit Scotland, 2014). The variety of tests used and the absence of systems for aggregation do not allow identification of those LAs that are more effective in their efforts to improve learning opportunities for learners than others. The challenge now is to improve the quality of information on those aspects of CfE that are valued by stakeholders, and enhance the confidence of all system players in its accuracy, while retaining the strongly formative focus.

Very recently, the Scottish Government has outlined one way to do this through a National Improvement Framework (Scottish Government, 2015b), which was still in the proposal stage at the time of preparing this review. This Framework has the potential to provide a robust evidence base in ways that enhance rather than detract from the breadth and depth of the CfE. Given Scotland's previous bold moves in constructing its assessment frameworks on the best available research evidence at the time, it now has the opportunity to lead the world in developing an integrated assessment and evaluation framework. This would contribute to the "take-off point" referred to in Chapter 3, one that retains the formative focus while at the same time providing a strong evidence base on which all stakeholders, including learners, can answer important questions about the quality and effectiveness of the learning opportunities envisaged for CfE throughout the education system. To achieve this goal, an important step during the consultation process will be to identify key principles on which to base the new assessment system that captures both the intended purposes, such as high quality information, and the possibilities for unintended consequences, such as reducing rather than promoting teachers' assessment capacities. These principles would form the basis of the new developments and provide transparency throughout the system and give criteria for subsequent evaluation of the system itself.

Box 5.1 Australian states sign up to assessment agreement

In Australia, following the *Melbourne Declaration on Educational Goals for Young Australians* in December 2008, Ministers agreed that public reporting on Australian schools would: support improving performance and school outcomes; be both locally and nationally relevant; and be timely, consistent and comparable. In June 2009, they agreed a set of eight principles and related protocols for reporting on schooling in Australia, the *Principles and Protocols for Reporting on Schooling in Australia*. This is a document which makes clear their commitment to transparent accountability.

The principles relate directly to data on student outcomes and information about the school context and resourcing. The protocols are designed to promote the integrity of the process and to provide safeguards against simplistic comparisons being made amongst schools (Shewbridge, C., et al. (2011a),

Sources: MCEETYA (Ministerial Council on Education, Employment, Training and Youth Affairs), Melbourne Declaration on Educational Goals for Young Australians, www.curriculum.edu.au/verve/_resources/National_Declaration_on_the_Educational_Goals_for_Young_Australians.pdf, Council of Australian Governments Education Council, (2009), *Principles and protocols for reporting on schooling in Australia*; Shewbridge, C., et al. (2011a), *OECD Reviews of Evaluation and Assessment in Education: Denmark 2011*, OECD Reviews of Evaluation and Assessment in Education, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264116597-en>.

In the remainder of this chapter these issues are discussed in greater depth for each part of the assessment and evaluation framework, with relevant information drawn from research and international experience.

Assessment of learners

Variability in practices around formative assessment is not surprising. The international research evidence indicates that high quality formative assessment practices are more elusive than originally thought, with implementation typically variable, even when teachers have been extensively trained in its use (Earl and Timperley, 2012; James et al., 2007). So, this is already challenging terrain, especially to ensure high quality formative assessment at scale. Contributing to the difficulty in Scotland are the efforts to keep the Experiences and Outcomes statements in the CfE deliberately broad which has led to many having the same wording at different levels. While the breadth provides flexibility and opportunities for teachers to be responsive to learners' needs, it inevitably creates difficulties for teachers when they come to make clear judgments about a learners' progress or level of achievement.

This problem can be exacerbated if an unhelpful dichotomy is created between formative and summative purposes for assessment, with the former promoted as essentially desirable and the latter being equated to standardised assessment with high-stakes accountabilities and curriculum distortions. For example in Scotland, two earlier evaluation reports (Condie et al., 2005; Hallam et al., 2003) outlined an ongoing tension between formative assessment aspirations and external accountability demands. Such labelling emphasises their oppositional properties. In reality, assessment and evaluation typically have multiple purposes that are spread more along a continuum than being one or the other. Occasionally, purposes are purely formative and have low stakes, for example, when learners generate their own feedback using performance criteria. Others

are essentially high stakes and summative, such as examinations at the end of secondary school. But these are the exceptions. It is more helpful to consider the issue in terms of the multiple purposes of any assessment activity and how it can provide high quality information for learners and those directly responsible for their education for improvement purposes.

Standardised assessment tools can be used formatively in all parts of the system if they are referenced to the curriculum, flexible in their use, and provide high quality just-in-time information for teaching and learning, while at the same time having efficient ways to aggregate the results through the system. One example is the Assessment Tools for Teaching and Learning (asTTle) developed by John Hattie for New Zealand schools and described in Box 5.2.

An important issue around the use of standardised assessments is that of trust, including trust that what is assessed is appropriate to the situation and that the results will be used for improvement and not become the vehicle for punitive consequences. This kind of trust is more likely to be maintained if teachers have some control over what is assessed and when it is assessed as is the situation with the asTTle. The development of the innovative *Insight* tool by the Scottish Government, in which a particular students' profile can be compared with 10 virtual students with similar characteristics, is a good example of how benchmarked information can be used formatively by teachers and schools to assess the quality and outcomes of their provision.

Other jurisdictions, such as New South Wales and Victoria in Australia have combined standardised tests at different year levels with developmental progressions involving rich descriptions for the intervening years to provide teachers with high quality information about what learners are expected to master. Progression descriptors allow teachers, parents and other stakeholders to assess the adequacy of progress through curriculum stages, thus providing a strong framework for formative assessment practices and reducing the amount of formal testing (that typically does not provide sufficiently detailed information on which to base individual programmes). In addition, the use of these kinds of progressions often offer opportunities for dialogue among teachers as they moderate each other's decisions about the adequacy of progress of particular students thus increasing rather than detracting from their assessment capabilities. An assessment system that encompasses a variety of assessment evidence, that includes rich tasks and a clear indication of expected benchmarks referenced to the breadth and depth of the curriculum, can enhance teachers' assessment skills and learners' progress.

School evaluation

Taken together, Scotland's system of self-evaluation, external evaluation and validated self-reviews meets most of the recommendations from research and practice for school level evaluation (OECD, 2013; Timperley, 2014). Validated self-reviews appear to be particularly strong in building capacity across the system because of the opportunities for learning through collegial participation of leaders from other schools, local authorities and *Education Scotland*. However, a question arises from earlier discussion in this chapter: How do questions about the accuracy of learner assessment impact on the robustness of school evaluation?

Box 5.2 New Zealand assessment tools for teaching and learning: e-asTTle

e-asTTle is an online assessment tool, developed to assess students' achievement and progress in reading, mathematics, writing, and in the same curriculum areas in Te Reo Māori. The reading and mathematics assessments have been developed primarily for students in years 5–10, but because they test curriculum levels 2–6 they can be used for students in lower and higher year levels. The e-asTTle writing tool has been developed for the assessment of students in years 1–10.

- e-asTTle provides teachers and school leaders with information that can be used to inform learning programmes and to apply teaching practices that maximise individual student learning.
- An important feature of e-asTTle is that the tests devised by teachers can be used at any time of the year, and there are many thousands of possible permutations of tests that can be created.
- e-asTTle allows teachers and school leaders to set tests that are aligned to the curriculum when they want and at the level they want, and to measure student progress over time.
- e-asTTle uses a programming method (linear programming heuristics) to create the "best possible" test while also meeting the requirements specified by the teacher.
- e-asTTle has developed a new approach to developing and classifying test items so that every test is tailored to the specific needs of the classroom.
- e-asTTle has made advances in standard-setting methodologies. It gives teachers a realistic picture of how well each student, class, or school is doing compared to the national average and the curriculum requirements (including curriculum levels). It allows comparisons to other groups such as gender, ethnicity, English as a second language, or "schools like mine".
- e-asTTle provides rich interpretations and specific feedback that relate to student performance (rather than simply providing a score). It identifies areas of student weakness and strength that may otherwise go unnoticed.
- e-asTTle presents the results in visual ways making it easier for teachers to discuss performance and the steps they're taking with students, parents, and boards of trustees.
- e-asTTle supports teachers by giving them direction and access to extensive and relevant Internet resources for raising student achievement more efficiently.

Source: Adapted from: Ministry of Education New Zealand, e-asTTle online assessment tool, <http://e-asttle.tki.org.nz/About-e-asTTle/Basics>.

An additional concern noted in a recent report by the Audit Office (Audit Scotland, 2014) is the variable capacity of local authorities to support improvement when a school is judged to be unsatisfactory (see Chapter 3). This is especially relevant in view of the difficulty of actually changing schools in the first place; as Earl wrote, “Twenty-five years of school improvement research has shown that changing schools depends on internal capacity and new learning” (Earl, 2014:1). Unless schools have or can develop the leadership capacity to improve (Ehren and Visscher, 2008; Matthews and Sammons, 2004), external review is unlikely to have much impact.

Research in the Netherlands (Ehren and Visscher, 2008), in England (Matthews and Sammons, 2004) and in New Zealand (Parsons, 2006) has identified common sets of conditions which lead to improvement following inspections which may provide some guidance for local authorities in their efforts to support schools. These conditions include:

- Evaluation criteria set clear expectations for school quality.
- Information and judgements are perceived to be fair with weak points and improvement strategies agreed by evaluators and schools.
- Expectations are established that schools will follow up on identified weak points and evaluator feedback.
- The impact of the review permeates through the layers of the system and has an effect on the interactions between learners and those responsible for teaching them.
- Results are shared with stakeholders.
- Schools have the leadership capacity to act on the changes.
- Practical external assistance is available to help schools develop the capacity to use the information internally for improvement purposes.

Given the challenges involved in using school evaluation for improvement, efforts to do so need to be evaluated, in order to be sure that they are effective beyond improving relationships and processes to also include improved learning opportunities for learners and better outcomes across the curriculum.

Professional standards and appraisal processes

The strengths of the professional standards and appraisal processes for teachers and leaders in Scotland are that they are strongly developmental across career states and largely consistent with international practice (O’Day, 2002; Klinger, Shulha and DeLuca, 2008). However, both sets of standards are strongly process focused, rather than having improvement in outcomes for learners as a central component. While learner outcomes should not be the only focus of a standards or appraisal system, because these outcomes are impacted by many factors beyond the control of teachers and schools, stronger reference to learners’ progress is more likely to create improvement.

The description of practitioner inquiry for teachers in the appraisal documentation, for example, is focused on the teachers, rather than promoting the learning of their students through CfE. As they are described in the guidelines, they are designed to:

- Develop and apply expertise, knowledge and understanding of research and impact on education.

- Develop and apply expertise, knowledge, understanding and skills to engage in practitioner enquiry to inform pedagogy, learning and subject knowledge.
- Lead and participate in collaborative practitioner enquiry. (p. 10)

There is little evidence that practitioner inquiry impacts directly on outcomes for student learners unless that inquiry is grounded in a specific learner-related challenge or problem, builds professional capital to solve that problem through evidence-informed collaborative inquiry, and assesses the effectiveness of the inquiry in terms of answering the question, "Have we made enough of a difference?" (Timperley, 2011)

The purpose of the professional standards for leadership and management are similarly focused on development and designed primarily to support school self-evaluation. This focus is consistent with the literature on professional appraisal and the formative assessment emphasis in the CfE (OECD, 2013). The emphasis on relationships, culture and processes, however, is not usually sufficient to support continued learner development and achievement (Robinson, Lloyd and Rowe, 2008). The standards imply, rather than state, the expectation that leaders will actually improve learner outcomes across the CfE.

System-level assessment and evaluation

There are two levels of system monitoring in Scotland: the local authorities and Scotland-wide through *Education Scotland*. Their responsibilities, almost by necessity, overlap in the assessment and evaluation space. The pivotal position of local authorities in the current assessment and evaluation structures and responsibilities honours Scotland's long tradition of local engagement and keeps the development resource close to those who know the schools. The review team were told of a variety of activities through which LAs have been instrumental in encouraging teachers to collaborate in understanding and executing their assessment responsibilities, particularly in the transitions between primary and secondary schools. This activity, however, has not necessarily increased the confidence of one sector in the other to provide robust assessment information on learner progress and achievement. In a recent report on assessment over the transition, Hayward et al. (2012) observed that "Although good use was being made of information on personal and social development in secondary schools, there was less evidence of assessment evidence on learning being used for purposes of learning progression." (Hayward, 2015:36). The exception was young people needing additional support for learning.

Many LAs collect information on youth awards (see Chapters 1 and 2) which contribute to and recognise a wide education experience for Scotland's young people and the broader capacities of CfE. Some authorities send this information to *Education Scotland* where it is aggregated and provides an important complement to the literacy and numeracy achievement data. The proposed new National Improvement Framework also suggests collecting national data on young people's health and well-being, an essential attribute of any national system, but rarely given sufficient attention internationally. Scotland should consider possible approaches to monitoring the development of all capacities of CfE to help emphasise its breadth and depth.

The development of system level monitoring, whether at the local authority level or Scotland-wide, requires sophisticated knowledge of assessment and evaluation and where the activities of one part of the system fit with another. As already noted, most local authorities have continued to assess learners using standardised assessments of literacy

and numeracy as part of their quality assurance systems. In some authorities, this testing occurs several times a year. In a recent report, Hayward raised concerns about the capacity of LAs to undertake this important task. "... local authorities tended to focus on assessment techniques rather than a deep understanding of the concerns from which techniques had been developed". (Hayward, 2015:29)

Given the number of LAs, their pivotal position in any assessment and evaluation framework and the research showing the complexities of developing a coherent assessment, evaluation and improvement framework, the activities of LAs in this space need to be carefully considered. That there are so many different approaches to assessment undertaken by the local authorities at the least suggests duplication and its accompanying inefficiencies. The necessity of such diversity of approaches needs to be carefully weighed; by the same token, if many such approaches are in effect indistinguishable, so should the argument be weighed in favour of going the extra step to coordination and coherence. Shared approaches to assessment by the local authorities would in any case help to strengthen the room for "leading from the middle" and this is an area for useful collaboration and coherence across LAs.

System-wide assessment

The Scottish approach of using light sample-based assessments is similar to a number of the high-performing education systems in the OECD, such as Finland, the Flemish Community of Belgium and the Netherlands (OECD, 2013). These sample-based tests can provide high-quality information similar to that of full cohort tests, can allow assessment on rich tasks, and have some advantages in terms of their lower costs. Over time, they can offer other advantages such as avoiding distortions of results derived from "teaching to the test" (Green and Oates, 2009).

Currently, however, the way national assessment is constructed in Scotland does not provide sufficiently robust information at all levels of the system, including LAs or an individual school or across important domains of CfE for learners and their teachers. This problem does not mean that everyone must be tested at particular year levels in order to have this information. An alternative, for example, could involve sample testing of a range of learners within each school on rich tasks which can then be used to benchmark the achievement of other learners on the curriculum.

Box 5.3 Assessment of “broader” student learning outcomes in Singapore

The “Thinking Schools” curriculum in Singapore explicitly focuses on creativity and independent problem-solving. Approximately 12 000 students are assessed annually with the task requirements centrally set by the Singapore Examinations and Assessment Board. The tasks are defined in such a way as to allow students to carry out a project of their own interest while meeting the following task requirements: 1) the project must foster collaborative learning through group work; 2) every student must make an oral presentation; and 3) both product and process are assessed. There are three assessment components: a written report, an oral presentation and a group project file to which each group member submits three documents related to snapshots of the processes involved in the project. Teachers assess the work but their marking is externally moderated. Issues of reliability are also addressed through extensive training on the assessment guidelines that contain assessment rubrics to clarify learning expectations together with assessment criteria and exemplar material that illustrate the expected marking standards. The Board provides training for assessors and internal moderators.

Source: Darling-Hammond (2010), “Draft White Paper 5: Policy Frameworks for New Assessments”, *ATCS (Assessment and Teaching of 21st Century Skills)*, <http://atc21s.org/wp-content/uploads/2011/11/5-Policy-Framework.pdf>. OECD, (2013), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, OECD Reviews of Evaluation and Assessment in Education, <http://dx.doi.10.1787/9789264190658-en>.

When considering a new approach to assessment within the National Improvement Framework, it may also be helpful to consider international developments in assessments, such as PISA. These including in their assessment frameworks attributes established as important for a rounded education for life and work which are essential to CfE, such as creativity and collaborative problem-solving. An example comes from Singapore (Box 5.3).

Evaluation, research and independent agencies

A number of high-quality, high-equity education systems have strong relationships with the evaluation and research communities and/or with independent agencies to promote robust system monitoring and development. They are typically located in a mix of government-based research institutes, autonomous statutory bodies, or university-based centres that have some distance from political decision making and can serve an important role in providing rigorous and independent analyses.

A great deal is at stake in any education system and a recent study by the OECD (OECD, 2013) emphasised the need for objectivity and credibility derived from independent sources. The independence of these kinds of agencies allows them to confront the education authorities where necessary and be impartial in their conclusions about the education system. They can provide a fresh and constructive external point of view informing the national debate.

The creation of agencies dedicated to evaluation and assessment recognises the need for specialised expertise, the imperative of building adequate capacity to deliver evaluation and assessment policies and the necessity of introducing some independence vis-à-vis education authorities. Functions of evaluation and assessment agencies may include technical leadership (e.g. in developing

evaluation instruments, guidelines, education indicators), implementation of evaluation and assessment procedures (e.g. national student assessments), the monitoring of the education system, the introduction of innovations on the basis of research results, the development of capacity for evaluation and assessment across the system, knowledge management (of results produced by evaluation and assessment activities) and the promotion of an evaluation culture. (OECD, 2013: 37)

The Netherlands, for example, benefits from its research infrastructure to support educational policy and practice. Its longstanding, independent Education Council advises the government on matters of education policy and law. In 2008, it established the Top Institute for Evidence Based Education Research (TIER) which is an inter-university collaborative that conducts research in the field of evidence-based education (see Box 5.4). This situation enables the Dutch government to call on independent research and assessment expertise. Other countries have created different statutory authorities to undertake this kind of independent system monitoring as described in Box 5.5.

Box 5.4 Research infrastructure to support policy and practice in the Netherlands

The Top Institute for Evidence Based Education Research (TIER) is an inter-university Top Institute that conducts research in the field of evidence based education. The Top Institute has three partners: the University of Amsterdam, Maastricht University and the University of Groningen.

The aim of TIER is to conduct excellent scientific research and to put the results of this research at the services of (and make usable for) educational practice and educational policy. It wants to develop knowledge of "evidence-based education" that can be used by: 1) the Ministry of Education, Culture and Science in policy preparation and evaluation; 2) the educational practice - such as educational institutions - in the allocation of means and in decision making when choosing between educational theories; and 3) parents and students when choosing a school or training.

The institute has four areas of focus: 1) development and assessment of effective educational interventions; 2) exploration of the societal context of education, with a central emphasis on societal facets of education and on the relationship between education and the labour market; 3) creation of a portal connecting the academic research world and the policy world of the Ministry of Education, Culture and Science and 4) development – in consultation with field professionals – of a Teacher Academy to facilitate the transfer of research findings to teachers in primary, secondary and higher education.

These four focus areas cover the entire spectrum of life-long learning, from preschool education through primary, secondary, vocational and higher education to continuing education and professional training.

Source: TIER (The Top Institute for Evidence Based Education Research), www.tierweb.nl

Box 5.5 Independent system monitoring: International examples

Denmark created a specific national authority to monitor compulsory education (the Quality and Supervision Agency, formerly the School Agency) in 2011 and an advisory body to evaluate priorities in compulsory education (The Council for Evaluation and Quality Development of Primary and Lower Secondary Education) in 2006 (Shewbridge et al., 2011a).

In the Flemish Community of Belgium, the Agency for Quality Assurance in Education and Training (AKOV) was established in 2009 to oversee all services related to quality improvement of education (Shewbridge et al., 2011b).

In Italy, the creation in 2004 of the National Institute for the Evaluation of the Education System (INVALSI) led to the development of national student assessments in place since 2008.

Similarly, in Ontario (Canada), the creation of the Education Quality and Accountability Office in 1996 was associated with the development of standardised student assessment to provide accountability and a gauge of quality in Ontario's publicly funded education system.

Source: OECD (2013), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, OECD Reviews of Evaluation and Assessment in Education, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264190658-en>.

Bringing together the three complementary aspects of curriculum, pedagogy and assessment in the CfE is an ambitious undertaking. Ensuring their effective integration in all its complexity requires ongoing evaluation to identify where the gaps and cracks are appearing, as they inevitably do, and to identify ways to address them without sacrificing the integrity of the whole. This requires researchers, those with specialist analytical capacity, policy-makers and practitioners to work together – which is usually easier to propose than to do. Several researchers and those from external agencies meeting with the review team highlighted issues on which they believed they could usefully contribute, such as:

- Developing monitoring systems and working with different communities to identify gaps in the system so they do not become chasms.
- Moving knowledge of excellent pockets of activities around the system.
- Assisting in developing a systemic evidence base for the implementation of CfE.

Examples exist where such work was commissioned with a constructive policy response (e.g. Boyd et al., 2007; Chapman et al., 2014; Hayward et al., 2012a; 2012b; Howieson, Semple, and Jackson, 2009). This involvement of researchers and others helps both to develop capacity within the universities and other agencies and to bring specialist expertise and independent views to policy development. It may be timely with the development of the National Improvement Framework to consider what kinds of independent agencies or specialist capacity can contribute to the next phase of the development of CfE and education in Scotland.

Summary of key points

Some of the key messages and conclusions emerging from this chapter may be summed up as follows:

- With the introduction of CfE, assessment became a part of the curriculum, bringing together assessment, curriculum and pedagogy to promote the idea that assessment is essentially part of, and not separate from, learning and teaching.
- The Scottish approach to school inspection focuses on each school's self-evaluation processes and this is consistent with the formative approach to learner assessment. Self-evaluation and the work of the inspectors are supported by well-considered indicators.
- While there are risks associated with excessive reliance of testing, it is unhelpful to exaggerate the dichotomy between the formative and summative, with the former promoted as essentially desirable and the latter equated with standardised assessment, high-stakes accountabilities, and curriculum distortions.
- Despite efforts to improve the robustness of professional judgements about learner progress and achievement on the Experiences and Outcomes in CfE, there is currently a lack of confidence in these judgements.
- An important reason is lack of certainty about what should be assessed in relation to the Experiences and Outcomes. The solution will lie in a mix of reducing the complexities of the task, amending the curriculum and assessment context as it confronts teachers, and improving the assessment capabilities of teachers and school leaders.
- The light sampling of literacy and numeracy at the national level has not provided sufficient evidence for other stakeholders to use in their own evaluative activities or for national agencies to identify with confidence the areas of strength in Broad General Education across the four capacities of CfE.
- Nor has the light sampling of literacy and numeracy by itself been enough to identify localities where intervention might be needed. There is variable capacity of local authorities to support improvement when a school is judged to be unsatisfactory.
- The different approaches to assessment undertaken by the local authorities open up the risk of duplication and militate against gaining a clearer all-Scotland picture. Shared approaches to assessment by the local authorities would contribute to a strengthened "middle" between the centre, on the one hand, and schools, on the other.
- There does not appear to be any large scale research or evaluation projects by either the universities or non-governmental agencies on what is working well in Broad General Education and what areas need to be addressed. Evaluation and feedback is provided through direct contact with schools, sector and interest group forums and information from local authorities.

Conclusions and recommendations

In the next phase of the CfE journey, Scotland has the opportunity to lead the world in developing an innovative national assessment, evaluation and improvement framework that is consistent with what is known about promoting student, professional, school and system learning. The current system has a strong formative emphasis for the players at each of these levels and other stakeholders through the development of carefully constructed processes of assessment, evaluation and appraisal. These processes are informed by research about how to promote positive outcomes for learners, their teachers and their leaders.

At the same time, there is recognition that more robust and systematic evidence is needed on which to base evaluative judgements at all levels of the system. The backbone for such judgements must be informed by trustworthy evidence of student progress and learning across the four capacities of CfE. Although considerable efforts have been made to improve the robustness of professional judgements about learner progress and achievement on the experiences and outcomes in CfE, there is currently a lack of confidence in these judgements. This issue is not surprising given the complexity of the task.

The challenge now is to construct systems and processes to develop this more robust evidential platform on which to base judgements about the health of the system at all levels while retaining the strong developmental and improvement emphasis. This is not an easy task because the potential for narrowing and distorting the curriculum and undermining the professional judgements of teachers is real. Scotland, however, has demonstrated innovative ways to use benchmarked information to inform development in upper secondary schooling through its *Insight* tool. *Education Scotland*, together with the complementary expertise of others within the system, now has the opportunity to develop similarly innovative processes for the years of the Broad General Education in ways that support the continued development of CfE.

Recommendations

Develop an integrating framework for assessment and evaluation that encompasses all system levels

It is important to have a coherent and carefully designed framework in order to maximise the quality of the information, to ensure that particular evidence sources are fit for the intended purpose, and to minimise unintended consequences such as reducing rather than promoting teachers' assessment capacities. The framework needs to integrate the purposes for which assessment and evaluation information is collected, ensure the evidence is high quality and fit-for-purpose with a clear line of sight from the experiences and outcomes in learners' educational environments. This means integrating processes and systems for learner assessment, teacher and leader appraisal, school evaluation together with local authority and national activities and policies. These should be driven by norms of collective responsibility and mutual accountability through processes of genuine inquiry. An important step will be to identify key principles on which to base the new assessment system that would provide transparency throughout the system and criteria for subsequent evaluation of the system itself.

Strike a more even balance between the formative focus of assessment and developing a robust evidence base on learning outcomes and progression

While learner outcomes should not be the only focus of a standards or appraisal system, stronger reference to learners' progress will create improvement. The light sampling of literacy and numeracy at the national level has not provided sufficient evidence for stakeholders to use in their own evaluative activities or for national agencies to identify with confidence the areas of strength. Nor has it allowed identification of those aspects or localities where intervention might be needed. Local authorities have sought to fill this space with their own assessments but this is fragmented. The challenge now is to improve the quality of information on those aspects of CfE that are valued by stakeholders including all capacities of CfE, while retaining the strongly formative focus (echoing a recommendation in Chapter 2).

Strengthen evaluation and research, including independent knowledge creation

CfE is an ambitious undertaking, requiring research and evaluation not only at the local level but to gain a clear picture at an all-Scotland level. Among the priorities for evaluation should be the quality of CfE implementation and efforts of using school evaluation for improvement. Among the research priorities we see a clear value in a research drive into schools and learning environments that make a significant difference to the engagement and achievement of those facing the greatest social and educational difficulties. (Both points pick up recommendations of the previous chapter.) A strong research and evaluation system requires researchers, those with specialist analytical capacity, policy-makers and practitioners to work together. We believe that strong relationships with the evaluation and research communities and/or with independent and non-government agencies working at some arm's length from political decision-making would benefit Scotland's education system. The need for objectivity and credibility derived from independent sources was also stressed in the 2013 OECD review of evaluation and assessment.

References

- Audit Scotland (2014), *School Education Report*, Accounts Commission, www.audit-scotland.gov.uk/docs/local/2014/nr_140619_school_education.pdf.
- Black, P., and D. Wiliam (1998), "Assessment and classroom learning", *Assessment in Education: Principles Policy and Practice*, Vol. 5/1, pp. 7–73.
- Boyd, B., et al., (2008), *Curriculum Architecture – a Literature Review, Report for the Scottish Executive Education Department*, University of Strathclyde, Glasgow.
- Council of Australian Governments Education Council, (2009), *Principles and Protocols for Reporting On Schooling In Australia*.
- Chapman, C. et al. (2014), *The School Improvement Partnership Programme: Using Collaborative and Enquiry to Tackle Educational Inequity. Report to Education Scotland*, University of Glasgow, Glasgow
- Condie, R., K. Livingston, and L. Seagraves, (2005) *Evaluation of the Assessment for Learning Programme: Final Report*, Glasgow, Quality in Education Centre, University of Strathclyde.
- Darling-Hammond, L. (2010), "Draft White Paper 5: Policy Frameworks for New Assessments", *ATCS (Assessment and Teaching of 21st Century Skills)*, <http://atc21s.org/wp-content/uploads/2011/11/5-Policy-Framework.pdf>.
- Earl, L., and H. Timperley (2014), "Challenging conceptions of Assessment", in V. Klenowski and C. Wyatt-Smith (eds.). *Assessment for Quality Learning*, Springer, pp 325-336.
- Education Scotland (2015), "Focus on making good assessment decisions", *Education Scotland News*, Spring 2015, www.educationscotland.gov.uk/Images/ESNewsSpring2015_tcm4-854620.pdf.
- Education Scotland (2014) *Monitoring and Tracking Progress and Achievement in the Broad General Education*, Education Scotland, www.educationscotland.gov.uk/Images/MonitoringTracking200214_tcm4-754310.pdf.
- Education Scotland (2010), "Curriculum for Excellence Building the Curriculum 5: A Framework for Assessment", The Scottish Government, Edinburgh https://www.educationscotland.gov.uk/Images/CfEReportingdocument_tcm4-612845.pdf.
- Education Scotland, "Curriculum for Excellence Implementation Priorities 2011- 2012", [/www.gov.scot/Resource/Doc/920/0121216.pdf](http://www.gov.scot/Resource/Doc/920/0121216.pdf) (accessed on 5 September 2015).

- Education Scotland, *Assessing Progress and Achievement of Levels in the 3-15 Broad General Education*, www.educationscotland.gov.uk/Images/CfEbrieing2_tcm4-730387.pdf (accessed 19 September 2015)
- Ehren, M. and A. Visscher (2008), "The relationship between school inspections, school characteristics and school improvement", *British Journal of Educational Studies*, Vol. 56/2, pp. 205–22, June.
- European Commission (2011), *Education and Training in a smart, sustainable and inclusive Europe* COM (2011) 902 final, Brussels, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0902:FIN:EN:PDF>
- Fullan, M. (2011). "Choosing the wrong drivers for whole system reform", *Seminar Series 204*, Centre for Strategic Education, Melbourne.
- GTCS (General Teaching Council of Scotland) (2012), *The Standard for Career-Long Professional Learning: supporting the development of teacher professional learning*, www.gtcs.org.uk/web/Files/the-standards/standard-for-career-long-professional-learning-1212.pdf.
- Great Schools partnership (2015), *The Glossary of Education Reform: Assessment*, <http://edglossary.org/assessment>.
- Green, S., and T. Oates (2009), "Considering alternatives to national assessment arrangement in England: Possibilities and opportunities", *Educational Research*, Vol. 51/2, June 2009, NFER, pp. 229-245.
- Hallam S., et al. (2004), *Assessment is for Learning: Development Programme. Evaluation of Project 1: Support for Professional Practice in Formative Assessment. Final Report* Edinburgh: SEED, SQA, LT Scotland, www.scotland.gov.uk/library5/education/eplaldps-00.asp.
- Hayward, L. (2015), "Assessment is learning: the preposition vanishes", *Assessment in Education: Principles, Policy and Practice*, Vol. 22/1, pp. 27-43.
- Hayward, L. et al. (2012), *Assessment at Transition. Project Report*. University of Glasgow, Glasgow.
- Hayward, L., and E. Spencer, (2010) The complexities of change: formative assessment in Scotland", *Curriculum Journal*, Vol. 21/2, pp. 161–177, Glasgow <http://dx.doi.org/10.1080/09585176.2010.480827>.
- Herman, J., and B. Gribbons (2001), *Lessons Learned in Using Data to Support School Inquiry and Continuous Improvement: Final Report to the Stuart Foundation*, National Center for Research on Evaluation, Standards, and Student Testing, Los Angeles.
- HM Inspectorate of Education, (2007) *How good is your school?*, www.educationscotland.gov.uk/Images/HowgoodisourschoolJtEpart3_tcm4-684258.pdf.
- Howieson, C., S. Semple and A. Jackson, (2009). *National Evaluation of the Recognising Achievement Collaborative Enquiry Project* Scottish Government (Education Analytical Services), Edinburgh.

- Hutchinson, C., and L. Hayward (2005), "The journey so far: assessment for learning in Scotland", *Curriculum Journal*, Vol. 16/2, pp. 225–248, Glasgow <http://dx.doi.org/doi:10.1080/09585170500136184>.
- James, M., et al. (2007), *Improving Learning How to Learn - classrooms, schools and networks*, Routledge, Abingdon.
- Klinger, D.A., L.M., Shulha and C. DeLuca (2008), "Teacher evaluation, accountability, and professional learning: The Canadian perspective", *Rev. Pensamiento Educativo*, Vol. 43, pp. 209-222.
- Linn, R.L. (2000), "Assessments and accountability", *Educational Researcher*, Vol. 29, pp. 4–16.
- Lucas, B., and G. Claxton (2010), *New Kinds of Smart: How the Science of Learnable Intelligence is Changing Education*, Open University Press, Berkshire, England.
- Matthews, P., and P. Sammons (2004), *Improvement through Inspection: An Evaluation of the Impact of Ofsted's Work*, Crown Copyright.
- MCEETYA (Ministerial Council on Education, Employment, Training and Youth Affairs), *Melbourne Declaration on Educational Goals for Young Australians*, www.curriculum.edu.au/verve/_resources/National_Declaration_on_the_Educational_Goals_for_Young_Australians.pdf
- Ministry of Education (New Zealand), *E-Asttle Online Assessment Tool*, <http://e-asttle.tki.org.nz/About-e-asTTle/Basics>, (accessed 20 November, 2015).
- O'Day, J. (2002), "Complexity, accountability and school improvement", *Harvard Education Review*, Vol. 72/3, pp. 293-329.
- OECD (2013), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, OECD Reviews of Evaluation and Assessment in Education, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264190658-en>
- Parsons, R. (2006), "External evaluation in New Zealand schooling", (Unpublished doctoral thesis). *Massey University*, Palmerston North, New Zealand.
- Pepper, D. (2011), "Assessing key competences across the curriculum – and Europe", *European Journal of Education*, Vol. 46/3, pp. 335-353.
- Popham, J. (2011), "Formative Assessment—A Process, Not a Test, *Education Week*, February 2011. www.edweek.org/ew/articles/2011/02/23/21popham.h30.html?t.
- Robinson, V. M. J., C. Lloyd and K. J. Rowe (2008), "The impact of leadership on student outcomes: An analysis of the differential effects of leadership type". *Educational Administration Quarterly*, Vol. 44/5, pp. 635-674.
- Scottish Government (2015a), *OECD-Scotland Education Policy Review: Country Background Report*, Scottish Government, Edinburgh.
- Scottish Government (2015b), *A Draft National Improvement Framework for Scottish Education* September, Scottish Government, Edinburgh, www.gov.scot/Publications/2015/09/7802 (accessed 8 October 2015).
- Shewbridge, C., E. Jang, P. Matthews, and P. Santiago (2011a), *OECD Reviews of Evaluation and Assessment in Education: Denmark 2011*, OECD Reviews of

- Evaluation and Assessment in Education, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264116597-en>.
- Shewbridge, C., M. Hulshof, D. Nusche, and L. Stoll (2011b), *OECD Reviews of Evaluation and Assessment in Education: School Evaluation in the Flemish Community of Belgium 2011*, OECD Reviews of Evaluation and Assessment in Education, OECD Publishing, <http://dx.doi.org/10.1787/9789264116726-en>.
- Timperley, H. (2014), *Promoting and Supporting Improvement in Schools through External Review*. Commissioned Report to the Education Review Office, Wellington: New Zealand.
- Timperley, H. (2011), *Realizing the Power of Professional Learning*, Open University Press, London.
- Timperley, H., L. Kaser and J. Halbert, (2014), "A framework for transforming learning in schools: Innovation and the spiral of inquiry" *Seminar series 234*. Melbourne, Centre for Strategic Education.
- TIER (The Top Institute for Evidence Based Education Research), www.tierweb.nl.
- William, D. (2010), "The role of formative assessment in effective learning environments", in Dumont, H., D. Istance and F. Benavides (eds.), *The Nature of Learning*, OECD Publishing, Paris, pp. 135-159.

Annex A The review team

External experts

Andy Hargreaves is the Thomas More Brennan Chair in Education at the Lynch School of Education, Boston College. He was co-founder and director of the International Centre for Educational Change at the Ontario Institute for Studies in Education in Toronto. He has been awarded several visiting professorships (in the US, the UK, Hong Kong, Japan and Singapore and Sweden), is Editor-in-Chief of the *Journal of Educational Change*, and has authored or edited more than 30 books. His current research is on successful educational change strategies in high performing schools, districts and countries; organisations that perform beyond expectations in business, sport and education; and special education reform strategies achieved through whole-school changes that also benefit all students. He is a researcher, writer, consultant and adviser and has delivered invited addresses and worked in 37 US states, 42 countries and all Australian states and Canadian provinces.

Helen Timperley, Professor at the University of Auckland, is a researcher, writer, consultant and adviser in the areas of professional, organisational and policy learning in ways that benefit those students achieving least well. Helen is a Companion to the New Zealand Order of Merit for Services to Education and has worked in a wide range of countries including Australia, Belgium, Canada, England, France, Germany, Sweden, The Netherlands, Norway, Wales and her home country New Zealand. She has published widely in peer reviewed journals, including the Review of Research in Education, Journal of Curriculum Studies, Journal of Educational Change, and Teaching and Teacher Education. Helen has also written several books in her specialist areas for practitioner audiences.

OECD experts

Maria Huerta is an Analyst with the Directorate for Education and Skills. As well as this review, she has been working on a major project on Education and Social Progress within OECD's Centre for Educational Research and Innovation (CERI), focusing especially on social and emotional competences. She recently joined the team on Early Childhood and Care. Previously, she was in the OECD Directorate for Employment, Labour and Social Affairs and was one of the main developers of the OECD Family Database. She worked at the Centre for Analysis of Social Exclusion at the London School of Economics investigating how family circumstances influence outcomes later in life, and was also advisor to the Director of Progres (now Oportunidades), Mexico's main anti-poverty programme.

David Istance (Review Leader) is a Senior Analyst with the OECD Directorate for Education and Skills. As well as this review, he heads *Innovative Learning Environments* (ILE), as he did its forerunner *Schooling for Tomorrow*, and is currently developing new work on teaching and innovation. His most recent OECD publication is *Schooling Redesigned: Towards Innovative Learning Systems* (2015). He designed and wrote the initial volumes of the OECD overview reports *Education Today: the OECD Perspective* and *Trends Shaping Education*, and earlier the OECD schooling scenarios and

background reports for OECD ministers of education. He has worked extensively on equity, teachers, and lifelong learning (with a particular recent interest in 3rd and 4th Age adults).

Annex B Review visit programme

Monday, 1 June 2015

Welcome meeting with Scottish Government Learning Directorate Senior Management Team.

Review Planning Team Meeting.

Curriculum for Excellence Management Board (CFE MB). The CFE MB includes members from teacher unions, Association of Directors of Education, *Education Scotland*, Scottish Qualifications Authority, National Parent Forum of Scotland, Council of Scottish Local Authorities (COSLA).

COSLA and ADES, the body representing Local authorities and the Association of Directors of Education.

A seminar conversation with the Research Community: hosted by the University of Glasgow, with participation from the universities and additional expertise including the Learned Societies.

Tuesday, 2 June 2015:

National Implementation Board (NIB) taking forward “Teaching Scotland’s Future”. NIB members are drawn from national organisations involved in teacher education including Education Scotland, General Teaching Council for Scotland, local authorities, teacher unions and professional associations, the Scottish Government and universities.

Student teachers: A group of 10-12 student teachers, a mix of one year and fourth year students offering views from the different Initial Teacher Education (ITE) options.

Scottish Teacher Education Committee (STEC): a non-statutory group that comprises the Deans/Heads of School of Education of the eight Scottish teacher education universities.

Ministerial Meeting: Scottish Parliament, with the Cabinet Secretary for Education and Lifelong Learning, Angela Constance and Minister for Learning, Science and Scotland’s Languages, Dr Alasdair Allan.

Meeting with *Education Scotland*: with the Chief Executive and senior managers.

Wednesday, 3 June and Thursday, 4 June 2015

Local authority and school visits:

- *West Lothian*: St Kentigern's High School; St Joseph's RC Primary School.
- *Glasgow*: Shawlands Academy; Langside Primary School.
- *Western Isles*: Nicolson Institute; Laxdale Primary School.
- *South Lanarkshire*: Calderside Academy; High Blantyre Primary School.

Meeting with *ADES* (Bruce Robertson).

Friday, 5 June 2015

Scottish College for Educational Leadership – Chief Executive, Chair and two SCEL fellows.

National Parent Forum for Scotland - the National Forum that works in partnership with national and local government and other organisations to represent parents.

Scottish Qualifications Authority (SQA) - Scotland's qualifications system and the *Curriculum for Excellence*.

Working Lunch hosted by the *Cabinet Secretary for Education and Lifelong Learning*.

Debrief and discussion of initial conclusions with *Review Planning Team*: pulling together findings from the week and clarifying questions and next steps.

Improving Schools in Scotland: An OECD Perspective

For the past decade, Scotland has been putting in place an ambitious reform called the “Curriculum for Excellence”. Its holistic approach includes Broad General Education from ages 3 to 15 years and this has been put into the spotlight of an OECD review by a team that included leading international experts Andy Hargreaves and Helen Timperley. The report, with twelve key recommendations, will be of interest to those who shape schools and curricula well beyond Scotland. It brings together wide-ranging international and Scottish data to understand how well quality and equity are being achieved in Scotland’s schools. Its analysis and examples from other countries address how such an ambitious reform can reach its full potential through demanding 21st century approaches to enhancing quality and equity, governance and decision-making, teaching and leadership, and evaluation and assessment.

Contents

Overview

Chapter 1: Scotland’s “Curriculum for Excellence”: Context and Structure

Chapter 2: Quality and Equity in Scottish Schools

Chapter 3: Decision-making and Governance for the “Curriculum for Excellence”

Chapter 4: Schooling, Teachers and Leadership

Chapter 5: Assessment, Evaluation and the “Curriculum for Excellence”.

Write to us

Policy Advice and Implementation Division
Directorate for Education and Skills - OECD
2, rue André Pascal - 75775 Paris Cedex 16 - FRANCE
edu.contact@oecd.org

Find us at:

www.oecd.org/edu/policyadvice.htm

Education and Skills data on GPS: www.gpseducation.oecd.org