LITERACY IN SCOTLAND

COUNTRY REPORT

CHILDREN AND ADOLESCENTS

March 2016

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TABLE OF CONTENTS

1 Introduction

This report on the state of literacy in Scotland is one of a series produced in 2015 and 2016 by ELINET, the European Literacy Policy Network. ELINET was founded in February 2014 and has 78 partner organisations in 28 European countries[1]. ELINET aims to improve literacy policies in its member countries in order to reduce the number of children, young people and adults with low literacy skills. One major tool to achieve this aim is to produce a set of reliable, up-to-date and comprehensive reports on the state of literacy in each country where ELINET has one or more partners, and to provide guidance towards improving literacy policies in those countries. The reports are based (wherever possible) on available, internationally comparable performance data, as well as reliable national data provided (and translated) by our partners.

ELINET continues the work of the European Union High Level Group of Experts on Literacy (HLG) which was established by the European Commission in January 2011 and reported in September 2012[2]. All country reports produced by ELINET use a common theoretical framework which is described here: "ELINET Country Reports – Frame of Reference"[3].

The Country Reports about Children and Adolescents are organised around the three recommendations of the HLG´s literacy report:

- Creating a literate environment
- Improving the quality of teaching
- Increasing participation, inclusion (and equity[4]).

Within its two-year funding period ELINET has completed Literacy Country Reports for all 30 ELINET member countries. In most cases we published separate **Long Reports** for specific age groups (Children / Adolescents and Adults), in some cases comprehensive reports covering all age groups. Additionally, for all 30 countries, we published **Short Reports** covering all age groups, containing the summary of performance data and policy messages of the Long Reports. These reports are accompanied by a collection of good practice examples which cover all age groups and policy areas as well. These examples refer to the **European Framework of Good Practice in Raising Literacy Levels;** both are to be found in the section "Good Practice"[5].

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[1] For more information about the network and its activities see: www.eli-net.eu.
[2] In the following, the final report of the EU High Level Group of Experts on Literacy is referenced as "HLG report". This report can be downloaded under the following link: http://ec.europa.eu/education/policy/school/doc/literacy-report_en.pdf.
[3] See: http://www.eli-net.eu/research/country-reports/.
[4] "Equity" was added by ELINET.
[5] See: http://www.eli-net.eu/good-practice/.

2 Executive Summary

A constituent country within the United Kingdom (UK), Scotland's devolved administration (known initially as the Scottish Executive and from 2008 as the Scottish Government) has responsibility for a number of areas including education. Historically, Scotland has always benefited from its own unique education and assessment systems, over which it has policy control. It has its own national curriculum and qualifications, and its own forms of system evaluation. The national curriculum is determined centrally, while school resourcing for learning and teaching is the responsibility of the 32 local education authorities. The country shares with many others around the world concerns about equality of educational access and opportunity for all individuals, irrespective of their background, needs or aspirations.

Now that pre-school education is essentially universal for 3-4 year olds, a new focus for the Scottish Government is the promotion of pre-school education for those 2-year-olds considered to be disadvantaged. Primary education begins at around age 5 and spans seven years. This is followed by three years of Broad General Education in the lower secondary school before most students move into a 2-3 year 'Senior Phase' of study for qualifications. Gaelic-medium and mixed-medium schools are an alternative to English-medium schools for the minority Gaelic community. Most children with special needs are accommodated in mainstream schools.

Students' literacy attainment

Scotland participated in the first two PIRLS surveys, carried out by the IEA in 2001 and 2006, and in all the triennial PISA surveys carried out by the OECD since 2000. As a result, the reading attainment of Scottish students at ages 10 and 15 can be set in an international context, complementing broader literacy achievement information furnished by the country's successive national assessment programmes.

The average reading performances of Scottish 10-year-olds in PIRLS 2001 and 2006 were similar across years and across both reading and reading comprehension processes. Scotland's performance was slightly lower than the average across participating EU countries, but with greater spread. In contrast, while the average reading test performance of Scottish 15-year-olds in the PISA surveys has fluctuated over the period (2000-2012), it has always been above the average for participating EU countries. The performance spread for Scottish students has been lower than that for the EU countries on average: the proportion of top-performing readers has been close to the average of participating EU countries, whereas the proportion of students considered as low-performing readers has typically been below the EU countries on average.

In PISA 2009, reading literacy was the principal focus in the survey. Although based on rather small subsamples in the case of students with an immigrant background, the reading performance gap between native students and those with an immigrant background was lower in Scotland than in EU countries on average, as was the performance gap between those Scottish students who always spoke the language of the test at home and those who did not.

As has been the case in many countries around the world, at both ages 10 and 15 girls produced significantly better reading performances than boys in all surveys, complementing findings for primary and lower secondary students in national assessment surveys for both reading and (extended) writing. In PISA surveys, the gender gap in Scotland has been narrower than the average for all participating

EU countries. Scotland has also evidenced a strong socioeconomic gap in performance, for reading in the international surveys and for reading and writing in national assessment surveys.

Policy initiatives regarding literacy

Elinet country reports focus on three major policy areas:

- Creating a more literate environment
- Improving the quality of teaching
- Increasing participation, inclusion and equity.

The Scottish Government has launched numerous initiatives over the past decade to address each of these areas where weaknesses have been apparent. Among the most important initiatives as far as developing literacy skills is concerned must be the introduction of the 3-18 Curriculum for Excellence (CfE), with its high emphasis on literacy, numeracy and health and wellbeing. At every level of education, all teachers, including secondary subject teachers and whatever their specialist subject, are required to support the development of knowledge, skills and personal attributes in these three key areas.

Creating a more literate environment

Compared with their peers in many other EU countries, Scottish students in general benefit from relatively good literacy environments in their homes and schools. The one area that continues to need strengthening is the digital environment in schools. A very recent national priority has been the provision of digital learning resources to help ensure that all students and teachers in every school throughout the country can benefit from the potential of technology to support learning and teaching. Resource provision alone, however, will not guarantee the ultimate aim of effective use of the new resource for improving student learning and attainment. In common with many other countries in Europe and elsewhere, there is an urgent need for the provision of ICT training for teachers at all levels if the widespread provision of digital learning devices is to be exploited effectively to improve student attainment in literacy and other areas.

Improving the quality of teaching

In Scotland, all terminology relating to pre-school provision and early education has been replaced by the term Early Learning and Childcare (ELC), which covers children up to 8 years of age. However, there is considerable diversity within ELC provision that is reflected in differences in work environments, qualifications, recruitment and retention, and career progression. Even given the recently introduced entitlement to increased hours for all children following their third birthday and for younger children in special circumstances, the diverse nature of the pre-primary sector, and the varying quality of learning experiences provided, could increase inequity rather than reduce it.

In contrast, teaching is an all-graduate profession in Scotland, though with alternative routes through initial training for those intending to teach in primary and pre-primary on the one hand and secondary subject teachers on the other. Full registration as a qualified teacher requires initial training to be followed by successful completion of a probationary period in schools, and thereafter all teachers are contractually obliged to complete a minimum of 35 hours of CPD per year, with an expectation that they will continue to develop their expertise and experience across all areas of professional practice (Career-long Professional Learning, CLPL).

Since the introduction of CfE, many local authority CPD programmes have focused on reading literacy to support the implementation of new curricula, and schools have tended to focus on literacy or numeracy in scheduled collegiate time (an additional 35 hours per school session). A need remains to improve the quality and participation rates of continuing professional development targeted at building the literacy expertise of all teachers, including teachers of all subjects in secondary schools.

Increasing participation, inclusion and equity

The Scottish Government has launched many programmes and initiatives aimed at increasing participation, inclusion and equity for children and adolescents. Preschool attendance is actively promoted, especially for those children who are considered disadvantaged. Support is available for children with special needs and for preschool children with language problems (both issues identified in early screening programmes), as well as for children and adolescents whose home language is not the language of school. Efforts continue to try to address the early-developed gender gap in reading (and writing), principally by providing boys with reading matter more suited to their natural interests than is often available in primary classrooms; the rapidly increasing use of digital learning devices in schools is expected incidentally to address this particular concern as well.

As a result of various initiatives to address the problem of early school leaving, Scotland's rate of early school leavers has been steadily reducing in recent years, and, at less than 9%, has already fallen below the EU's 10% target rate for 2020.

3 General Information on the School System in Scotland

Scotland is one of the four constituent countries of the United Kingdom (UK), but it does not share the same education system as the other three UK nations. Scotland has traditionally enjoyed full autonomy in matters of education, at all levels. It has its own school curriculum (the 3-18 Curriculum for Excellence), its own national qualifications, its own funding arrangements, and its own forms of system evaluation. Schooling is centralised, and delivered under the aegis of the Scottish Government (previously the Scottish Executive). Local authorities, of which there are 32 across the country, are responsible for the provision of statutory education, with funding from central government and local taxation.

The school system is organised into four major stages (Figure 3.1): preschool, primary, lower secondary and upper secondary (including further education colleges). Compulsory education lasts 11 years, from age 5 to age 16, spanning primary and lower secondary education.

Figure 3.1: Structure of the Scottish School System
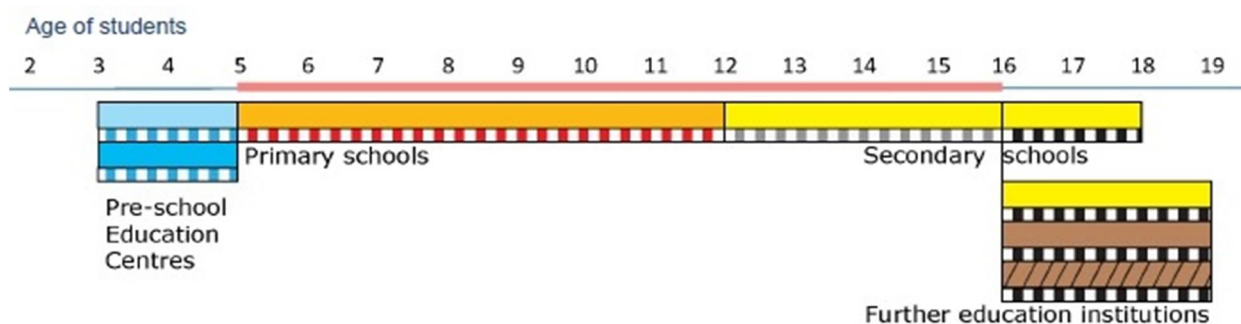
Source: Eurydice 2014

Scotland shares many of the same educational challenges as the rest of the UK, and other countries more widely, including concerns about equality of educational access and opportunity for all individuals, whatever their demographic makeup. Scotland also has some unique challenges in this respect, given its diverse geography: a lightly populated rural borderland with England to the south, a densely populated urbanised 'central belt', remote and sparsely populated highlands and islands to the far north and north west (in particular the Western Isles, or Outer Hebrides), another ribbon of islands, large and small, running the length of the west coast, with further sparsely populated islands (Orkney Islands and the even more remote Shetland Isles) to the far north east towards the Norwegian coast.

The great majority of children and adolescents in Scotland receive their education through the medium of English. But Gaelic-medium education is available by law to the small Gaelic-speaking communities of the Western Isles and the western mainland, either in wholly Gaelic-medium schools or in schools with a choice between Gaelic and English. Catholic schools in Scotland have historical roots in a 1918 concordat between the Roman Catholic Church and the State. Catholic schools in Scotland are now public schools – designated as 'denominational schools'. These denominational schools also

include numbers of non-Catholic pupils whose parents prefer the ethos of a catholic education. The majority of denominational schools are in the central belt.

At the start of the 2015-16 academic year almost 680,000 children and adolescents in Scotland (mainland and islands) were in the school system (Scottish Government 2015a), representing almost 13% of the population of around 5.2 million. Approximately 23% of learners had additional support needs, while another 5% or so had English as an Additional Language.

Local authorities have a duty to secure a part-time funded place in an early learning and childcare centre for every child, from the beginning of the school term after the child's third birthday. As a result, preschool attendance is almost universal for 3-4 year olds in Scotland, at just under 97%. Compulsory education starts at an age between 4½ and 5½: children whose 5th birthday falls between the beginning of March one year and the end of February the following year have the option of starting school in the middle of the period or of deferring entry for a year. Children spend seven years in primary education (classes P1 to P7), the longest period internationally, shared with just three other countries, *viz*. Iceland, Denmark and Norway (OECD 2014a, p.430). They then move on into the first year of the three years they will spend in the lower secondary school (classes S1 to S3), spending the last year (S4) of compulsory education in what is now known as 'the Senior Phase'. At the end of this period of compulsory education students can in principle choose to continue their education in the secondary school (classes S5, S6), transfer to a further education college to pursue more vocationally-oriented courses, or leave education for the world of work. Throughout primary and secondary education the majority of learners with special educational needs are taught in mainstream schools; those with the most complex needs, around 1% of all learners, are educated in special schools.

4 Literacy performance data for children and adolescents

4.1 Reading performance data: children (PIRLS)

Inaugurated in 2001 and conducted every five years, PIRLS (Progress in International Reading Literacy Study) is a sample-based assessment of students' reading achievement at around age 10 (fourth grade in most participating countries, P5 in Scotland) organized by the International Association for the Evaluation of Educational Achievement (IEA). A survey was administered in 35 countries in 2001, 45 education systems in 2006, and 50 in 2011. PIRLS assesses different purposes for reading (literary and informational) and different reading processes (retrieve explicit information, make inferences, interpret and integrate ideas and information, examine and evaluate content, language, and textual elements). Both multiple-choice and open-ended questions are used.

Combining newly-developed reading assessment passages and questions each year with a selection of secure assessment passages and questions from previous surveys allows for measurement of change over time. PIRLS also examines national policies, curricula and practices related to literacy in participating countries, and includes a set of questionnaires for students, parents/caregivers, teachers, and school principals to investigate the experiences that young children have at home and at school in learning to read, in particular their attitudes and motivation towards reading.

For all PIRLS data used in this report, detailed tables for all participating countries in ELINET are provided, together with the EU averages (ELINET Appendix D: PIRLS 2006 Data). Note that the EU average fluctuates depending on the cycle and the number of participating EU countries – it has been computed across 14 countries in 2001 and 21 in 2006.

4.1.1 Overall reading performance

Scotland took part in PIRLS 2001 and PIRLS 2006, but not in PIRLS 2011. The decision not to participate in PIRLS 2011 was taken to reduce pressure on primary schools in this small country, given the launch in that same year of the first survey in the new national assessment programme, the Scottish Survey of Literacy and Numeracy (SSLN). The most recent PIRLS data that are available for Scotland therefore emanate from the 2006 survey (for full details see the PIRLS 2006 survey report – Mullis et al. 2007; for highlights from Scotland's results see Scottish Government 2007).

10-year-olds in Scotland (year group P5) achieved an overall mean reading score of 527 in PIRLS 2006 (Table 4.1), an achievement essentially unchanged compared with 2001. Four countries among the EU-21 (the 21 European countries that participated in PIRLS 2006) had significantly lower mean scores (Spain, Belgium (FR), Poland and Romania). Performance in Scotland was closely similar across the two reading purposes - Literary and Informational – in 2006, as in 2001, and also across the two reading comprehension processes – Retrieve and Infer, and Interpret, Integrate and Evaluate (ELINET Appendix D, Tables A2-A5).

Table 4.1: Overall performance in PIRLS 2006 – Scotland and EU-21 Average

	Overall Reading - Mean Score
Scotland	527
EU-21	534

Bold indicates a statistically significant difference between the country and the EU-21 average.

Performance in PIRLS is reported against five attainment benchmarks: Advanced, High, Intermediate, Low and below Low. In Scotland, 23% of 10-year-old students performed at or below the Low benchmark for overall reading (Table 4.2), slightly higher than the EU-21 average of 19%. The proportion of students at the Advanced benchmark in Scotland in 2006 was in line with the EU-21 average, at 10% compared with 9%.

Table 4.2: Performance by overall reading benchmarks – percentages of students – PIRLS 2006

	Below 400	400-475 Low	475-550 Intermediate	550-625 High	Above 625 Advanced
Scotland	7	16	37	30	10
EU-21	4	15	37	35	9

In Scotland, the difference between the scores of students at the 90th and 10th percentiles, at 204 points, is higher than the corresponding EU-21 average of 177 (Table 4.3).

Table 4.3: Spread of achievement –10th and 90th percentiles, and difference between 90th and 10th percentiles for overall reading – PIRLS 2006

	10th Percentile	90th Percentile	Mean Score Difference 90th-10th
Scotland	420	624	204
EU-21	442	620	177

Statistically significant mean score differences in **bold**.

As far as any performance change between 2001 and 2006 is concerned, Table 4.4 indicates that performance was in fact essentially stable over the period, in Scotland as in the EU group (a group comprising an additional seven countries in 2006 compared with 2001).

Table 4.4: Performance 2001-2006 (Overall reading scale) – Scotland and EU Average

	2001	2006	Change (2006-2001)
Scotland	528	527	-1
EU Average*	537	534	-3

* The EU average is across 14 participating countries in 2001 and 21 in 2006.

4.1.2 Subgroup performance differences

Although the data are now a decade out-of-date, it might be interesting to offer the picture of difference between Scotland and participating EU countries in PIRLS 2006, as far as subgroup performance differences are concerned (Figure 4.1).

Figure 4.1: Subgroup Performance Gaps* in Scotland and on Average in the EU-21 – PIRLS 2006
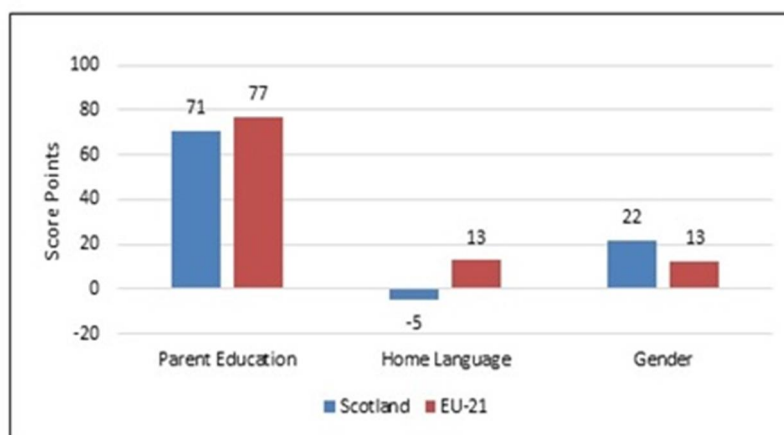
*Education: University – Lower Secondary or lower; Language: Language of test spoken always – sometimes/never; Gender: Girls – Boys.

Parents' educational achievement

Students in Scotland whose parents completed University or Higher achieved a mean score (580) that was some 71 points higher than students whose parents completed Lower Secondary or below (509). The average difference across the EU-21 was 77 points (Table 4.5). The greater difference for the EU-21 compared with Scotland is almost entirely attributable to the poorer mean score achieved by the lowest performing student group, i.e. those whose parents had at best attended the lower secondary school for some time. In other groups mean score differences were similar (ELINET Appendix D, Table G1).

Table 4.5: Percentages of parents whose highest level of education was Lower Secondary, and percentages who finished University or Higher and students' mean scores – PIRLS 2006

Level of Education	Lower Secondary or Below		University or Higher		Mean Score Difference (University or Higher – Lower Secondary)
	%	Mean	%	Mean	
Scotland	15	509	32	580	71
EU-21	18	497	25	574	77

Statistically significant mean score differences in **bold**.

Principal language spoken at home

In Scotland, 80% of students reported that they always spoke the language of the PIRLS reading test at home – a higher proportion than the corresponding EU-21 average of 70% (Table 4.6). Just 1% reported that they never spoke the language of the test at home. The difference in achievement between students in Scotland reporting that they always spoke the language of the test at home

versus those who never spoke it at home was 48 score points, some 11 points lower than the corresponding EU-21 average difference of 57 points.

Table 4.6: Percentages of students reporting that they always or never spoke the language of the PIRLS test at home, and associated mean score differences – PIRLS 2006

Language of the Test Spoken at Home	Always		Never		Mean Score Difference (Always – Never)
	%	Mean	%	Mean	
Scotland	80	528	1	480	48
EU-21	70	542	4	485	57

Statistically significant mean score differences in **bold.**

Gender

In 2006, girls in Scotland achieved a mean score for overall reading that was higher than boys by 22 points – a statistically significant difference. The difference is almost double that of the EU-21 average of 13 points (Table 4.7). In 2001 Scotland and the EU-14 showed similar gender gaps.

Table 4.7: Change in performance by gender 2001-2006 (overall reading scale) – Scotland and EU Average

	Scotland			EU Average*		
	Girls	Boys	Girls – Boys	Girls	Boys	Girls - Boys
2006	538	516	22	541	528	13
2001	537	519	18	545	528	17

Statistically significant mean score differences in **bold.** *The EU average is across 14 participating countries in 2001 and 21 in 2006.

Attitudes to Reading

In 2006, there was a difference of 67 points between the 'high' and 'low' groups on the 'Attitudes to Reading' scale in Scotland (Table 4.8), i.e. between the group indicating the most positive attitudes to reading and the group indicating the least positive attitudes to reading. On average across the EU-21, the difference between students in these two groups was 48 points, suggesting a stronger relationship between liking reading and performance in Scotland.

Table 4.8: Mean overall reading scores of students in the high and low groups of the PIRLS Attitudes to Reading Scale – PIRLS 2006

Like Reading	High Group	Low Group	Mean Score Difference (High - Low)
Scotland	558	491	67
EU-21	556	508	48

Statistically significant mean score differences in **bold.**

Students in Scotland who were in the group with the highest levels of self-concept towards reading achieved a mean reading score (556) that was some 99 points higher than students in the lowest self-concept group (457) (Table 4.9). The average difference across the EU-21 was 88 points, the group of

low self-concept students in Scotland achieving a lower mean reading score than the average for the EU-21.

Table 4.9: Mean overall reading scores of students in the high and low self-concept groups based on the PIRLS Self-Concept Towards Reading Scale – PIRLS 2006

Self-Concept Towards Reading	High Self-Concept Group	Low Self-Concept Group	Mean Score Difference (High – Low)
Scotland	556	457	99
EU-21	559	471	88

Statistically significant mean score differences in **bold.**

4.2 Reading performance data: adolescents (PISA)

The sample-based Programme for International Student Assessment (PISA) led by the OECD[6] assesses the skills and knowledge of 15-year-old students every three years in all OECD countries and in a number of partner countries and jurisdictions. Since 2000, PISA has been testing students in reading literacy, mathematical literacy and scientific literacy. Information is also gathered on students' backgrounds, and on practices, motivational attributes and metacognitive strategies related to reading when reading is the major domain (2000 and 2009).

The PISA tests assess different aspects of reading literacy – retrieve information, interpret, reflect and evaluate on texts – and use a variety of texts – continuous (prose) and non-continuous (texts including graphs, tables, maps...). About half of the questions are multiple-choice, the other half open-ended (short or constructed answers). Results are reported on scales defining different levels of proficiency ranging from 1 (low performing) to 6 (high performing). Level 2 is considered as the level all 15 year-olds should reach, to enable them to participate effectively to society. Since 2015, PISA has been administered on computers only in most participating countries.

In the tables displaying performances and trends (section 4.2.1), data from the cycles in which reading was the major domain (2000 and 2009), and from the most recent cycle (2012), are reported. With a single exception, 2009 data are used in the section focusing on subgroup performance gaps, since variables focusing on reading-related outcomes, such as attitudes and metacognition, were not addressed in PISA 2012. For all PISA data used in this report, the EU average fluctuates depending on the cycle and the number of participating EU countries – it has been computed across 21 countries in 2000, 26 in 2009 and 27 in 2012.

4.2.1 Overall reading performance

Scotland has participated in PISA since 2000. It is therefore possible to describe any change in reading performance over the period 2000-2012, according to different student characteristics. In PISA 2012 (OECD 2014b), Scotland performed 17 score points above the average for the 27 EU countries that took part in the survey that year (Table 4.10). On the PISA scale this difference is apparently equivalent to almost a half-year of schooling.

Table 4.10: Reading performance in PISA 2012

	Overall Reading - Mean Score
Scotland	506
EU-27	489

Bold indicates a statistically significant difference between the country and the EU-27 average.

The performances in reading of Scottish students fell significantly between 2000 and 2009, the years in which reading literacy was the major assessed domain, with essentially no change between 2009 and 2012 (Table 4.11).

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[6] See: http://www.pisa.OECD.org.

Table 4.11: Trends in reading performance – mean scores in PISA 2000-2012

	2000	2009	2012	Change 2000–2009	Change 2009–2012	Change 2000–2012
Scotland	526	500	506	-26	6	-20
EU average*	489	486	489	-3	5	3

Significant differences between assessment cycles in **bold** * The EU average is across 21 participating countries in 2000, 26 in 2009 and 27 in 2012.

In Scotland the spread of achievement in 2012 was significantly lower than the average for those 27 EU countries that participated in the survey that year (Table 4.12). At just under 13%, there was a significantly lower proportion of students in the 'below Level 2' group compared with the EU-27 group average of 20%. Scotland and the EU group as a whole had essentially the same low proportions of students in Levels 5/6 (Table 4.13).

Table 4.12: Spread of achievement. Difference between 10th and 90th percentiles on the reading scale, all students – PISA 2012

	Mean Score Difference 90th-10th
Scotland	220
EU-27	251

Significant differences between the country and EU-27 in **bold**

Table 4.13: Percentage of low-performing (below Level 2) and high-performing (Levels 5 and 6) students - PISA 2012

	% Below level 2	% Levels 5 and 6
Scotland	12	8
EU-27	20	7

Statistically significant differences between the country and EU-27 in **bold**

4.2.2 Subgroup performance differences

The majority of tables in this section present data from PISA 2009 (OECD 2010a, 2010b), this being the most recent survey in which reading literacy was the major domain, as it was in 2000. Figure 4.2 illustrates the PISA 2009/2012 performance gaps in Scotland compared with the EU averages for some of the principal student subgroups discussed below.

Figure 4.2: Subgroup Performance Gaps* in Scotland and on Average in the EU participating country group– PISA 2009/2012
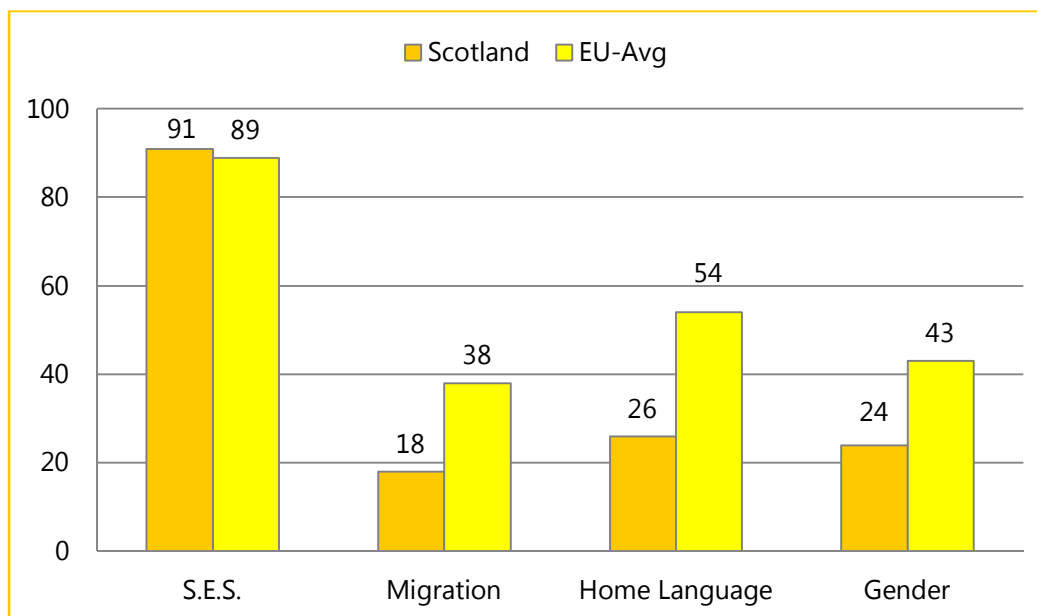
* SES: Top – Bottom quartile on the PISA ESCS scale; Migration: Native – first/second generation immigrants; Language: Speaks language of the PISA test at home – speaks another language; Gender: Girls - Boys

Socioeconomic status

In 2009, the gap in reading performance according to students' socioeconomic background was essentially the same in Scotland as in the set of 26 European countries that participated that year. This gap of 91 score points (Table 4.14) is equivalent to almost three years of schooling, according to PISA analyses.

Table 4.14: Difference in reading performance between bottom and top national quarters of the PISA index of economic, social and cultural status – PISA 2009

	Mean score difference
Scotland	91
EU-26	89

Statistically significant differences in mean scores in **bold**

Gender

The gender difference in reading performance in Scotland in the 2009 survey was lower than the EU-26 average, with a 24-point difference in favour of girls compared with the EU-26 average of 43 points (Table 4.15). The performance gap fluctuated slightly in Scotland over the period 2000 to 2012 (Table 4.16).

Table 4.15: Mean reading performance by gender – PISA 2009

	Girls	Boys	Difference Girls – Boys
Scotland	512	488	24
EU-26	507	464	43

Significant differences between boys and girls in **bold**

Table 4.16: Mean reading performance by gender – PISA 2000-2012

	Scotland			EU Average*		
	Girls	Boys	Difference Girls – Boys	Girls	Boys	Difference Girls – Boys
2000	541	511	30	506	473	33
2009	512	488	24	507	464	43
2012	520	493	27	511	468	43

Significant differences between boys and girls in **bold** * The EU average is across 21 participating countries in 2000, 26 in 2009 and 27 in 2012.

Migration

At the time of the 2009 survey, just 4% of the students in Scotland had an immigrant background, and the performance gap between native students and those with an immigrant background was lower here than the average of the 26 EU countries that took part in the survey that year: an 18-point difference in Scotland versus an EU-26 average of 38 points (Table 4.17).

Table 4.17: Percentage of students and reading performance by immigrant status – PISA 2009

	Native students		Students with an immigrant background (first- or second-generation)		Mean Score Difference Native - Others
	%	Mean	%	Mean	
Scotland	96	504	4	486	18
EU-26	92	490	8	452	38

Statistically significant differences between native and immigrant-background students in **bold**

Language spoken at home

In Scotland, the gap between students speaking the test language at home and those who did not (around 2% of the tested students) is, at 26 points, half that for the EU-27, at 54 points (Table 4.18).

Table 4.18: Percentage of students and reading performance, by language spoken at home – PISA 2012

	Spoke test language at home		Spoke another language at home		Mean Score Difference according to language spoken at home
	%	Mean	%	Mean	
Scotland	98	503	2	477	26
EU-27	87	494	13	441	54

Significant differences according to the language spoken at home in **bold**.

Engagement and metacognition

In Scotland in 2009, there was a gap of 126 score points – equivalent to three years of schooling – between students who reported being highly engaged in reading (top quarter), and those who reported being poorly engaged (bottom quarter). Not surprisingly, students who reported being engaged in reading performed better in the survey. The performance gap was higher in Scotland than the EU-26 average of 99 points (Table 4.19).

Table 4.19: Mean reading scores between students poorly engaged and highly engaged in reading – PISA 2009

	Low quarter (poorly engaged)	Top quarter (highly engaged)	Mean Score Difference Top quarter – Low quarter
Scotland	448	575	126
EU-26	444	543	99

Significant differences according to the level of reading engagement in **bold**.

In Scotland in 2009, there was a performance gap of 84 score points between students who could identify the most efficient strategies for understanding and remembering a text, and those who had only a limited knowledge. On average, in the EU-26, the gap was somewhat higher, at 98 points (Table 4.20). These large differences reflect how closely reading proficiency and awareness of efficient reading strategies are linked.

Table 4.20: Mean reading scores between students in the low and top quarters of understanding and remembering strategies – PISA 2009

	Low quarter	Top quarter	Mean Score Difference Top quarter – Low quarter
Scotland	459	543	84
EU-26	433	531	98

Significant differences according to the degree of awareness of understanding and remembering strategies in **bold**.

The performance gap between students who knew which strategies are the most efficient for summarising a text and those who had only limited knowledge was essentially the same in Scotland in 2009 as in the EU-26, at 91 points and 90 points, respectively (Table 4.21).

Table 4.21: Mean reading scores between students in the low and top quarters of summarising strategies – PISA 2009

	Low quarter	Top quarter	Difference Top quarter – Low quarter
Scotland	451	542	91
EU-26	440	530	90

Significant differences according to the degree of awareness of summarising strategies in **bold**.

4.3 Literacy performance data from national assessment programmes (SSLN, SSA)

Scotland is renowned for its long-standing schools inspection service, Her Majesty's Inspectorate of Education (HMIE), whose inspectors visit samples of early learning centres, primary and secondary schools, special schools, further education colleges, prisons and young offenders' institutions across the country each year, evaluating all aspects of education provision and publishing reports of their findings (for an overview of trends in findings over the period 2008-2011, see Education Scotland (2012a).

National assessment programmes have also traditionally played an important role in system evaluation (Johnson 2016), by contributing information about learners' attainments in key curriculum areas, and about the learning environment. The first such programme, launched in the mid-1980s was the Assessment of Achievement Programme (AAP). This focused on attainment in English, mathematics and science at ages 9, 12 and 14. When the 5-14 curriculum was introduced into the country in the early 1990s the AAP was adapted to report attainment with reference to the same 6-level progression framework that teachers were themselves using in the classroom (Munro 2003). The AAP was replaced in the mid-2000s by the Scottish Survey of Achievement (SSA), which had essentially the same remit as the AAP, but which was expected to report at the level of local authorities as well as nationally. When the Curriculum for Excellence (CfE) was launched into schools in the late 2000s, the SSA was replaced by the Scottish Survey of Literacy and Numeracy (SSLN), which was intended to be more 'CfE-compliant'. Literacy and numeracy are assessed in alternate years (Spencer 2013), at the end of CfE First Level (year group P4), at the end of CfE Second Level (year group P7), and at Third Level (year group S2). The information in this section is taken from the SSLN, and its predecessor programme, the SSA.

4.3.1 Performance findings: children and adolescents (SSLN)

The sample-based Scottish Survey of Literacy and Numeracy (SSLN) is intended to monitor the literacy and numeracy attainment of learners in primary (P4, P7) and lower secondary (S2) schools. Literacy and numeracy are assessed in alternate years, the first literacy surveys having been carried out in 2012 and 2014. Literacy surveys are not confined to the assessment of reading, but also embrace writing, and listening and talking. The SSLN was designed to be compliant with Curriculum for Excellence, its principal remit being to report on the general quality of population performance at each stage at each relevant Curriculum Level (First, Second, Third, respectively, for P4, P7, S2). To facilitate this reporting requirement a common set of performance labels was adopted across the language modes: 'not yet working within the level', 'working within the level', 'working well at the level', 'working very well at the level' and 'working beyond the level'. The proportions of children and young people falling into these different performance bands are formally reported.

The familiar format of tasks comprising source texts (continuous or discontinuous) with associated questions is used for the assessment of reading comprehension. Paper-based reading is complemented by an element of digital reading. Cut-scores were agreed before the event for use in classifying reading performances: at all stages, a test score of 80% or more meriting a decision 'working very well at the level' and scores between 60% and 79% meriting 'working well at the level'. Writing is assessed on the basis of teacher judgement of the quality of pieces of continuous writing submitted by participating schools for their sampled students, with three trained teachers from other

schools independently rating each script. Listening and talking skills were assessed in 2014 by trained itinerant observers (again practising teachers) as target students engaged in small-group discussions in their classrooms, with one assessor visiting any one school.

Students completed questionnaires about their learning experiences in and out of school, and their attitudes to learning. Teachers completed questionnaires about their literacy teaching and student assessment practices, and about their literacy resources and preparation. For further information see Scottish Government (2013a, 2015b).

Overall performance

The general picture of performance was similar in both survey years, although all achievements were slightly lower in 2014 compared with 2012, overall and across all student subgroups (Scottish Government 2015b).

Although not directly comparable, given inevitable differences in the ways that the different language modes were assessed and the different assessment tasks that were necessarily used at the different stages, the survey results for reading performance in literacy surveys (2012 and 2014) were more positive at all stages than results for writing or for listening and talking. For reading, 80-90% of students across the stages were considered to be working well or very well at the respective Curriculum Level, compared with 55-70% for writing and 50-65% for listening and talking (for writing, and listening and talking, the percentages include students judged as 'working beyond the level').

In general, the best assessment results were produced in P7, followed by P4 and then S2. However, the fact that students at the different stages were assessed for achievement at different Levels, using different items and tasks, renders any straightforward interpretation of comparative stage achievement problematic: indeed, the survey programme was not designed to facilitate interpretable statements about stage progression, as its predecessor had been.

Subgroup comparisons

Socioeconomic status

Three deprivation categories are used for attainment reporting in the SSLN. These are 'the least deprived 30 per cent', 'the middle 40 per cent', and 'the most deprived 30 per cent', as defined by the Scottish Index of Multiple Deprivation (SIMD – for details see Scottish Government 2012a), based on individual students' home postcodes.

In reading, writing, and listening and talking, strong performance gaps emerged across the three deprivation categories, in what has become an expected direction (Figure 4.1). Performance was systematically higher the less deprived the group of students assessed. Performance differences across deprivation categories were larger at S2 (lower secondary) than at the primary stages: 12-13 percentage point differences between least and most deprived groups in the primary stages gave way to a 22 percentage point gap at S2. Similar gradations in performance emerged for writing at P7 and S2, though at P4 the performance gaps between deprivation groups were small and non-significant.

Figure 4.1: Percentages of students performing well or very well in reading, by stage and deprivation category – SSLN 2014
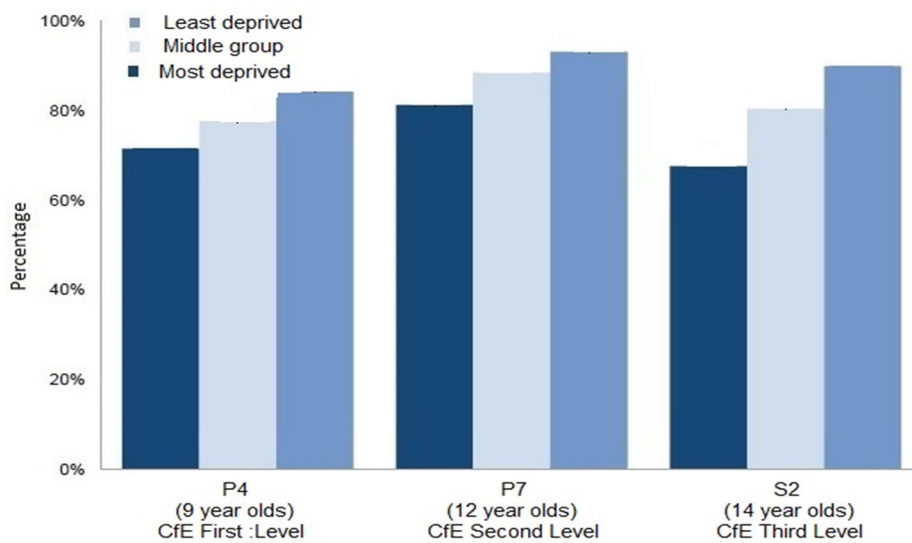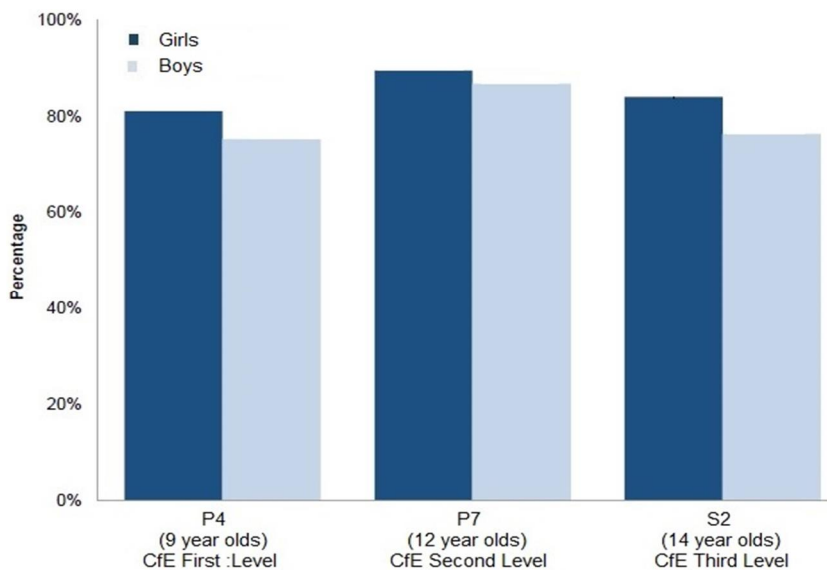

Source: Adapted from Scottish Government 2015b, Chart 2.4, p.13

Gender

As expected from previous national survey findings, as well as from PIRLS and PISA (see Sections 4.1 and 4.2), girls produced better reading performances than boys at all three stages, and significantly so at P4 and S2 where there were 6 and 8 percentage point differences, respectively, in the proportions of students judged as doing well or very well at the level (Figure 4.2). In writing girls also outperformed boys at every stage. The gender gaps at P4 and S2 for writing were twice as wide as for reading (13 percentage points at P4 and 16 percentage points at S2 for script evidence of working well at, very well at, or beyond the level); at P7 the performance gap was 11 percentage points for writing against just 3 percentage points for reading. Only for listening and talking were boys judged to have produced better performances than girls, and this at S2 only, though the performance gap, at just 5 percentage points, was too small to reach statistical significance.

Figure 4.2: Percentages of students performing well or very well in reading, by stage and gender – SSLN 2014

Source: Adapted from Scottish Government 2015b, Chart 2.3, p.12

4.3.2 Performance findings: children and adolescents (SSA)

The sample-based Scottish Survey of Achievement (SSA) was intended to monitor the attainment of learners in the early, middle and final years in the primary school (P3, P5, P7) and in the second year of the lower secondary school (S2), in English language, mathematics, science, social subjects enquiry skills and core skills. Attainments were reported at the levels of education authorities as well as nationally, necessitating cohort coverage in some of the smaller authorities. The first surveys in 2005 and 2006 had a principal focus on both literacy and numeracy, while the final survey in 2009 looked at literacy alone (this survey was narrower in scope in other ways as well, with a remit to report attainment at national level only, using assessment tasks used in 2005/2006, in order to release personnel time for the planning and preparation of the SSLN).

For reading comprehension, the familiar format of tasks comprising source texts (continuous or discontinuous) with associated questions was used, though the tasks were all paper-based and were longer than those now used in the SSLN. Writing was assessed on the basis of teacher judgement of the quality of pieces of continuous writing submitted by participating schools for their sampled students, with three trained teachers independently rating each script. Students and teachers completed questionnaires intended to gather comprehensive contextualising information about literacy learning.

The SSA reported attainment with reference to the 5-14 curriculum then in operation in schools, with its six-level progression framework (Level A to Level F), whereas the SSLN is intended to report attainment in terms of Curriculum for Excellence Levels. There was therefore an instant intended discontinuity over time in survey reporting parameters, with the consequence that overall population attainment comparisons have little meaning across programmes. It is nevertheless pertinent to overview the findings provided by the SSA in terms of subgroup performance differences, and in terms of links between performance and student characteristics. For further information, see Scottish Executive (2006a, 2007) and Scottish Government (2010a).

Subgroup comparisons

Socioeconomic status

Deprivation-related performance differences were not reported in the 2005 survey report. In the 2006 and 2009 survey reports (Scottish Executive 2007, Scottish Government 2010a), on the other hand, performance differences were reported for two deprivation groups. One group, labelled 'most deprived', comprised those sampled students living in the 20% most deprived areas in Scotland, based on the first (2004) Scottish Index of Multiple Deprivation (SIMD); the second group, 'less deprived', comprised all other sampled students. As the SSLN has in turn reported, strong deprivation-related performance gaps emerged for reading and writing. Performance was systematically higher for the 'less deprived' group. Deprivation-linked performance gaps increased with age, through the primary school and into the lower secondary school. Figure 4.3 illustrates the situation for reading comprehension for the most challenging of the three 5-14 levels assessed at the relevant stage in the 2009 survey (Level C at P3, Level D at P5, Level E at P7 and Level F at S2). For P3 and P5 (8 and 10 year olds, respectively, at the time of testing) the attainment gap between the 'most deprived' student group and the 'less deprived' group was 12 percentage points. The gaps for P7 (12 year olds) and S2 (14 year olds) were higher at 14 and 15 percentage points, respectively. Similar gradations in

performance emerged for writing in the 2006 survey (there was no attainment reporting by deprivation in the 2009 survey report).

The 2005 and 2006 surveys were both designed to report literacy and numeracy attainment at the level of education authorities as well as nationally. Authority performances were closely aligned with their overall deprivation rankings (Scottish Executive 2006a, 2007).

Figure 4.3: Deprivation-related performance gaps in reading comprehension, by stage – SSA 2009 (differences in the percentages of 'most deprived' and 'less deprived' students showing evidence of 'well-established' or better skills at the highest 5-14 level assessed at the stage)
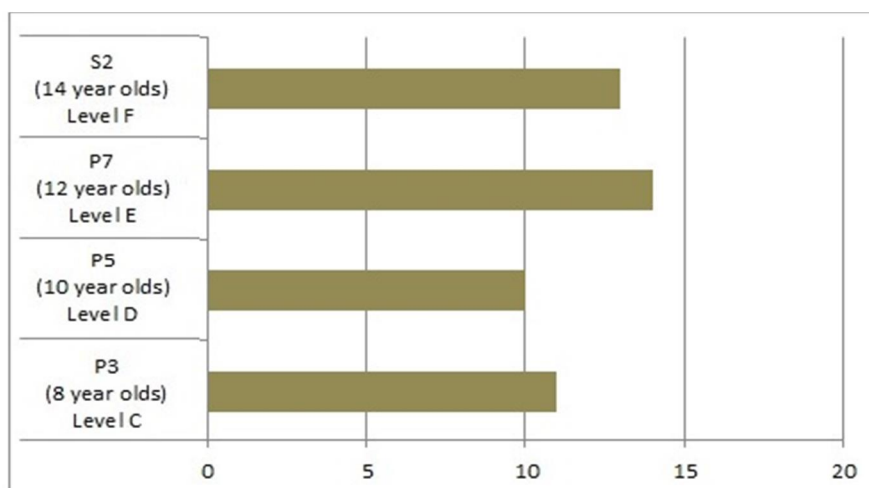
Source: Data given in Scottish Government 2010a, Chart 3, p.7

Gender

As expected from previous national survey findings, as well as from PIRLS and PISA, and confirmed in the SSLN, girls produced better reading performances than boys right through the primary school, and into the lower secondary school in all three SSA surveys of reading achievement (Scottish Executive 2006a, 2007; Scottish Government 2010a). There were also strong, statistically significant, gender differences in favour of girls at every school stage for writing performance in all three surveys.

In addition, it was reported that there was evidence of strong topic effects at play in the reading assessment, 'with larger gender differences emerging for some tasks compared with others' (Scottish Executive 2006a, p.19). Similar evidence had emerged in surveys within the predecessor Assessment of Achievement Programme. It might be of interest to note here that a reading comprehension component ('science literacy') was included in the 2007 SSA science survey that took a similar form to the regular reading comprehension assessments, i.e. reading tasks comprising source material (text and/or graphs, diagrams, etc.) with associated comprehension questions. An important feature in the tasks in this case was that the featured topics all concerned some aspect of science, though science knowledge beyond that given in the material was not required for a response: example topics, for tasks at increasing 5-14 levels, included 'Floating and sinking', 'Sounds', 'Healthy teeth', 'Saving energy', 'The Pluto problem' and 'Asthma breakthrough' (Scottish Government 2008a, Annex II). The picture of achievement that emerged differed from that usually observed in reading comprehension surveys in that there were 'no consistent differences in achievement between girls and boys across stages and levels' (Scottish Government 2008a, p.21). The strong and general performance difference in favour of girls so frequently reported in reading surveys nationally and internationally was not evident here.

The replacement of the SSA with the SSLN provided an opportunity to address the unwanted influence of topic effects on the validity of reading comprehension assessment, not by rejecting 'offending' topics, but by introducing a greater variety of topic into the survey to assure greater reporting validity. Shorter reading tasks in the SSLN offered the advantage of greater topic coverage within any one test, and in consequence in the survey as a whole.

Self-assessments

Among the many enquiries in the SSA student questionnaires was one in 2005 that invited students to rate themselves for English language – "How good do you think you are at English Language?" (for the youngest age-group the question was "How good do you think you are at language?"). Students responded by selecting one of four response options, *viz.* 'very good', 'good', 'average', 'not good', or indicating that they did not know (Scottish Executive 2007).

Around two-thirds of the students in each age-group estimated their language ability to be good or better, the proportions estimating it as very good dropped by roughly ten percentage points per stage, from just over four in ten at P3 (8 year olds) to just over one in ten at S2 (14 year olds), as Figure 4.4 illustrates. The proportions of 'don't know' responses also decreased with increasing age. The picture was similar for boys and girls, with the notable exception that at age 8 girls tended to be much less certain of their standing in this regard than boys, almost 30% of the girls responding 'don't know' compared with 20% of the boys.

Figure 4.4: Self-assessments of students aged 8, 10, 12 and 14 in English language – SSA 2005 (percentages offering indicated ratings)

Source: Scottish Executive 2006a (data); Johnson & Munro 2009 (chart).

It was interesting that when linked to test performances it was evident that the proportions of students considering themselves to be 'very good' at English language were rather similar across the attainment bands, whereas for mathematics and science the better the test performance in the respective subject survey the more likely was the student to have claimed to be 'very good' in that subject (Figure 4.5).

Figure 4.5: Self-assessments of lower secondary school students, by test attainment (5-14 level) – SSA 2005, SSA 2006, SSA 2007 (percentages giving a self-assessment of 'very good')
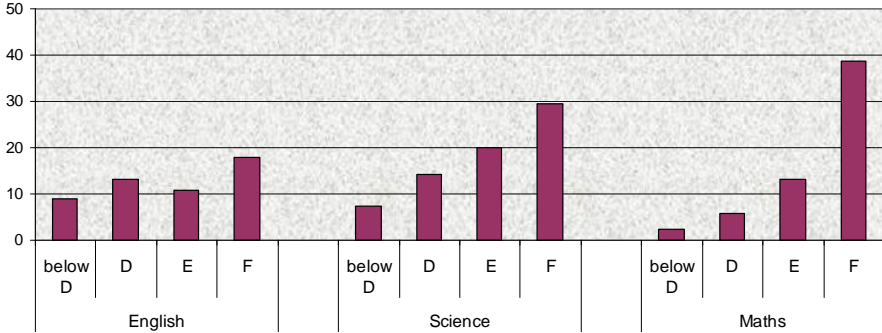
Source: Johnson & Munro 2009.

5 Policy Areas

The High Level Group of Experts on Literacy recommended that all EU Member States should focus on the following areas as they craft their own literacy solutions (HLG 2012, p.38):

1) Creating a more literate environment
2) Improving the quality of teaching
3) Increasing participation, inclusion and equity (the term "equity" was added by ELINET).

The following sections address primarily these three key issues, based on a review of national data up to and including 2015.

In the interests of cross-country comparison, quantitative and qualitative indicators for which information from international data is available are reported. ELINET Appendix A provides information on criteria for the choice of indicators, and the chosen indicators for the pre-primary age group. ELINET Appendix B offers a table for each indicator, in which values are included for all the ELINET countries. ELINET Appendix C is derived from the PIRLS 2011 international database, and contains separate tables for all information reported. ELINET Appendix D offers the same information for the PIRLS 2001 and PIRLS 2006 data.

5.1 Creating a literate environment for children and adolescents

The EU High Level Group of Experts on Literacy stated the following in relation to creating a more literate environment:

> Creating a more literate environment will help stimulate a culture of reading, i.e. where reading for pleasure is seen as the norm for all children and adults. Such a culture will fuel reading motivation and reading achievement: people who like to read, read more. Because they read more, they read better, and because they read better they read more: a virtuous circle which benefits individuals, families and society as a whole. (HLG 2012, p. 41).

Parents play a central role in children's emergent literacy development. They are the first teachers, and shape children's language and communication abilities and attitudes to reading by being good reading role models, providing reading materials, and reading to the child.

Schools play an important role in offering a literate environment for students. Schools may foster reading motivation and reading for pleasure by establishing school and classroom libraries, offering a wide variety of books and other reading material in different genres, providing sheltered and comfortable spaces for individual reading activities (like reading clubs), and not forcing children into having to express and exchange their individual (intimate) reading experiences.

However, schools do not have sole responsibility. A broad range of actors may shape literacy motivation, from parents and peers to libraries. Parents may provide role models and influence children's attitudes towards literacy practices. Also, libraries have a vital role if they offer free books, especially for families who cannot afford to buy books. Regional or national campaigns may inspire children and their parents to engage in reading activities. (Cf. ELINET Country Reports, Frame of Reference, pp. 29ff.)

Adolescence is a crucial phase in life where young people develop long-term *identities and self-concepts* which include media preferences and practices (*media identity*). In this perspective, it is of

great importance that families, schools and communities offer young people rich opportunities to encounter the *culture of reading* and develop a stable *self-concept as a reader/writer* and member of a literary culture. This includes access to a broad variety of reading materials (in print and electronic forms) and stimulating literate environments in and outside of schools; it also includes opportunities to get actively involved in engaging with texts, and communicating, reflecting on and exchanging ideas about texts with peers and ´competent others´, such as teachers or parents (Ibid., pp. 45f).

5.1.1 Providing a literate environment at home

The home learning environment, particularly in the first three years, is extremely important. It determines the quantity and quality of interactions between the infant and the primary caregivers, who are the most powerful agents of language development, both receptive and expressive, in the context of everyday activities and experiences. During these years, experience-dependent creation of synapses is maximal. We know that the more words the children are exposed to, the more they can learn. Caregiver-child relations in their turn strongly influence the ability to learn, by influencing self-esteem, general knowledge and motivation.

Several indicators are used to describe the literate home environment of very young children in this report, drawing on data from PIRLS 2006, Scotland not having participated in PIRLS 2011. When reviewing the information, it should be borne in mind that the PIRLS enquiries discussed here involved self-reporting on the part of parents. In consequence, the findings might be biased by social desirability, by memory issues (retrospective recall), and by the ways in which questions were interpreted by respondents within and between countries; they are also by now quite dated.

Number of children's books in the home

PIRLS 2006 sought information from parents on the number of books in the home, with response options 'none or few' (0-10 books), 'one shelf' (11-25), 'one bookcase' (26-100), 'two bookcases' (101-200), 'three or more bookcases' (200+). In the majority of countries, including Scotland, around 30-40% of responding parents reported having one bookcase of books at home; in Scotland, around 20% reported having two bookcases of books and another 20% three bookcases or more, while just under 20% responded 'one shelf' and just over 10% 'none or few books' – all figures were in line with the EU-21 Averages (ELINET Appendix E, Table E.1).

The mean performance of students in Scotland, as in the EU group as a whole, increased with every increase in book availability, but was around 10 points lower than the EU-21 Average for all but the most privileged student group (three bookcases or more), where the small gap essentially disappeared. The findings suggest an association between reading performance and the number of books available in the home.

Home Educational Resources

Also in PIRLS 2006, an index of home educational resources (based on a scale that includes number of books at home, number of children's books at home, access to a quiet place to study, internet access, and parent education and job status) categorised availability as high, medium and low. While a parent response rate for this item that was lower than 85% makes it difficult to draw firm conclusions, over three quarters of Scottish students (77%) fell into the medium category (6 percentage points lower than the EU-21 average) with 21% categorised as having high availability (8 percentage points above EU-21). No students were in the low category. The comparative performance results for medium and

high availability might be taken to support the assumed importance for students of having access to as wide a range of resources as possible in the home.

Parental support for reading

In recognition of the association between low levels of literacy and poor educational attainment, employment prospects, poverty, health inequalities and lower social and political participation in society, in 2010 the Scottish Government published an action plan on literacy designed to help raise standards of literacy for all, from early years to adulthood. As well as building reading, writing and communication skills, the intention of the plan is to ensure learners are supported to move on to the development of advanced literacy skills, including critical thinking, analysis, evaluation and interpretation. In providing strategic direction, the action plan is said to build on good practice whilst ensuring that literacy will have 'a central and continuing focus in education and related Government policies' (Scottish Government 2010b, p.3).

Among the strategies outlined in the plan, the Government pledged a range of support for parents to help young children develop literacy skills. This included plans to support parents who were experiencing their own literacy difficulties.

The final report on the literacy action plan was published in 2015 (Scottish Government 2015c). In relation to the impact of the home learning environment on very young children in particular, the report confirms continued Government support for programmes which encourage parents to support early literacy development. From 2014, the new Parentzone[7] website, hosted by Education Scotland, has been providing parents with new and updated information to help them support their children's learning.

5.1.2 Providing a literate environment in school

The final report on the Government's Literacy Action Plan (Scottish Government 2015c) re-emphasises the high priority given to literacy in CfE, the new Curriculum for Excellence (Scottish Executive 2006b), with all teachers assigned responsibility for developing literacy skills, irrespective of the age-group or the subject they teach. Literacy is also said to feature strongly in profiles of the achievements of young people in Scotland from P7 on, and through to the Senior Phase (from fourth to sixth year in secondary education). Literacy also features prominently in National Qualifications, and is one of five key themes in a Government initiative entitled Raising Attainment for All (RAfA)[8].

The 3-18 Curriculum Review of Literacy and English Provision in Schools (Education Scotland 2015a) reports on progress in implementing the Literacy Action Plan and identifies a number of strengths. These include: young people enjoying their reading as a result of the range of relevant and stimulating contexts, and engaging with a wider range of texts; staff feeling more confident in using CfE guidance to ensure learners make continuous progress; early intervention and partnership working being used effectively across sectors to support literacy development; and, where there is strong leadership for literacy, there are indications of improvement in the learning experiences provided and in learners' performance.

The Review also highlights a need to prioritise raising attainment in literacy across all sectors and suggests staff in schools and local authorities might work together to drive up standards by: reducing

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[7] http://www.educationscotland.gov.uk/parentzone/.
[8] http://www.gov.scot/Topics/Education/Schools/Raisingeducationalattainment/RAFA.

inequity; ensuring literacy development across all curriculum areas; improving transitions to build on prior learning; tracking and monitoring progress, and planning assessment as part of learning. Importantly, among the recommendations in the Review is reference to the need for all staff to develop children's advanced literacy skills in order to challenge their thinking and involve them more actively in the process of learning.

5.1.3   Providing a digital environment in school

Scotland has for a decade or so had a nationally available digital environment for learning, known as Glow, which all schools across the country, public and private, along with colleges and universities, have access to through secure institutional accounts. Glow access means access to a range of different web services and resources that allow users 'to create, collaborate and innovate' [9]. During its early years of development, however, through the mid to late 2000s, Glow was subject to a number of technical problems and design-related issues that resulted in low take-up and a growing sense of frustration within the education community.

In response, in August 2012 the Government convened an ICT in Education Excellence Group[10] to consider the future of Glow. After several meetings, stakeholder consultations and visits to authorities and schools, the Group reported early in 2013 with a long and comprehensive series of recommendations. The first recommendation was that there should continue to be a Scottish schools digital learning environment, provisionally dubbed Glow+, and that this should be as open as possible. The many other recommendations covered aspects of system design and development, accessibility and use[11].

Since then, the Scottish Government has been in the process of developing a Digital Learning and Teaching Strategy for the country[12], whose five principal objectives are to:

- change the culture of the use of digital technologies
- improve confidence in the use of digital technologies by learners, teachers, school leaders and parents
- promote new pedagogies
- increase and strengthen parental engagement
- provide the best possible support for hardware and associated ICT infrastructure (to ensure that ICT can be used effectively to enhance learning and support delivery of CfE).

To feed into this development, a literature review on the impact of digital technology on learning and teaching was commissioned (ICF Consulting Services 2015). The study had a particular focus on how digital technologies can support and contribute to five specific national educational priorities: raising attainment, tackling inequalities and promoting inclusion, improving transitions into employment, enhancing parental engagement, and improving the efficiency of the education system.

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[9] http://www.gov.scot/Topics/Education/Schools/ICTinLearning/Glow.
[10] http://www.gov.scot/Topics/Education/Schools/ICTinLearning/ICTinEducationExcellenceGroup.
[11] ICT in Education Excellence Group – Final report. 2012.
 http://www.gov.scot/Resource/0041/00412968.pdf.
[12] http://www.gov.scot/Topics/Education/Schools/ICTinLearning.

In addition, a public consultation on the proposed Digital Learning and Teaching Strategy ran through the Autumn of 2015, underpinned by four key themes:

- Empowering **leaders** of change to drive innovation and investment in digital technology for learning and teaching
- Improving **access** to digital technology for all learners
- Ensuring **curriculum and assessment** relevance in a digital context
- Extending the skills and confidence of **teachers** in the appropriate and effective use of digital technology.
  (Scottish Government and Education Scotland 2015, p.15, with original emphasis)

The outcomes of the consultation will be published in 2016.

In the meantime, action has also been taken by the Scottish Government to address the patchy availability of portable digital learning devices in schools. Local education authorities are responsible for providing learning resources to schools, including digital learning resources, and provision of the latter has been highly variable across the country and from school to school. While all Scottish schools have access to Glow, not all students in every school have direct ongoing access to a digital device for learning in the classroom and at home.

Wishing to ensure that the potential for technology to support learning and teaching in Scotland is maximised, in August 2012 the Scottish Government approved the establishment of a single-source National Framework for Notebook and Tablet Devices[13]. Replacing the lengthy and time-consuming tendering processes that individual education authorities were previously constrained to engage in when procuring learning resources, they, and eligible educational establishments, can now purchase a variety of notebook computers and tablets from a single supplier, along with proprietary software and professional development training, with ease and cost savings. The Framework commenced in March 2013 and was recently extended to the end of May 2016. By the end of 2015 authorities had taken advantage of the benefits of the Framework to purchase tens of thousands of notebook computers and tablets for students and teachers.

Challenge: In common with many other countries in Europe and elsewhere, there is an urgent need for the provision of ICT training for teachers at all levels if the widespread provision of digital learning devices is to be exploited effectively to improve student attainment in literacy and other areas.

5.1.4 Programmes for introducing parents and children to libraries and bookshops

The 3-18 Curriculum Review of Literacy and English (Education Scotland 2015a) reports many early learning and childcare settings making good use of local libraries to increase children's opportunities to engage with books. A pilot project that involved automatic enrolment in public libraries seems likely to result in a recommendation that all local authorities should take automatic enrolment approaches forward (Scottish Government 2015c). The Parentzone website referred to earlier suggests a number of fun ideas to encourage good reading habits, one of which encourages library visits.

Challenge: Recent financial constraints on local authorities have resulted in restrictions on the number of local libraries available.

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[13] http://www.gov.scot/Topics/Government/Procurement/directory/IThardware/tabletdevices.

5.1.5 Improving literate environments for children and adolescents: Programmes, initiatives and examples

Family literacy programmes

The final report on the literacy action plan identified two family literacy programmes operating at national level: the Bookbug[14] programme and Play Talk Read[15], both of which are pitched at families with very young children. Bookbug, provided in association with the Scottish Book Trust[16], involves book gifting and accompanying suggestions for play and learning. A combination of Bookbug packs, interactive sessions and an outreach programme uses children's books as what are described as 'shared social, emotional learning experiences' (Scottish Government 2015c). Evaluation of the Assertive Outreach Programme ('Bookbug for the Home') found an increased involvement of families in public Bookbug sessions and suggested positive changes in children's development and family interaction as a result (Blake Stephenson 2015). Working in eight additional authorities each year the aim is to have country-wide coverage over four years.

The Play Talk Read (PTR) campaign makes use of PTR buses, website and social marketing campaigns and is reportedly making 'a strong impact in places where it is most needed' (Scottish Government 2015c, p.9). In the year to August 2014, for example, there were over 100,000 visits to the PTR website, and 40,000 children and parents visited the two PTR buses during the same period.

Many early learning and childcare settings are reported to have developed home lending libraries which help ensure children have access to a range of books (Education Scotland 2015a) with some providing story sacks, board games and other activities to develop children's literacy skills in partnership with parents. Free access to these resources helps address the issue of equity.

Initiatives to foster reading engagement among children and adolescents

Statistics provided by The Reading Agency[17] indicate that increasing numbers of children in Scotland are participating in their annual Summer Reading Challenge (sponsored in Scotland by Tesco Bank), in which young people are challenged to read six books during their extended summer break. Funding allows each local authority to purchase materials for 300 children and arrange a visit from an author. The total number participating in 2014, at well over 41,000, was an increase of 18% on the numbers involved in 2011.

Scotland's colleges have contributed to literacy development and implementation of Government policies such as More Choices, More Chances (Scottish Executive 2006c) and Opportunities for All (Scottish Government 2012b), the Government's guaranteed offer of a place in education or training for all 16-19 year olds in Scotland. Youth literacy also features in the National Youth Work Strategy[18].

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[14] http://www.scottishbooktrust.com/bookbug.
[15] http://playtalkread.scot/.
[16] www.scottishbooktrust.com.
[17] http://readingagency.org.uk.
[18] http://www.educationscotland.gov.uk/Images/YouthWorkStrategy181214_tcm4-823155.pdf.

5.2 Improving the quality of teaching

To improve the quality of teaching, important aspects need to be considered:

- quality preschool
- coherent literacy curricula
- high-quality reading instruction
- early identification of and support for struggling literacy learners
- highly qualified teachers (cf. Frame of Reference for ELINET Country Reports).

In 2000, the recently devolved Scottish Parliament launched a 'National Debate on Education', that involved gathering views about the current system, along with suggestions for change, from teachers, parents, policy makers, students and other stakeholders. A comprehensive response from the then Scottish Executive announced plans for reform that encompassed almost every aspect of education provision, including curriculum, teacher training and teaching responsibilities, ICT resourcing, physical infrastructure, student absenteeism and behaviour, and many more (Scottish Executive 2003). One of the key priorities for action was to:

> **Increase pupil choice** by reviewing the school curriculum to suit 21st century needs and to reduce substantially the current overload in the 5-14 curriculum. We will establish which subjects might form a well-balanced core around which pupils will have expanded access to choices such as vocational training. (Scottish Executive 2003, p.5)

The eventual outcome of this particular priority for action is the 3-18 Curriculum for Excellence (CfE), whose top-level aims are to develop successful learners, confident individuals, responsible citizens and effective contributors (Scottish Executive 2004a). CfE was launched in the early years and primary sectors in 2009, with introduction into lower secondary schools following one year later, and sequential roll-out into the 'Senior Phase' then completing the transformation. For a comprehensive overview of the essential features of the Curriculum for Excellence see OECD (2015), and for a review and evaluation of CfE implementation to date, see Education Scotland (2015a).

Eight curriculum areas are embraced in the Curriculum (LTS 2009):

- Expressive Arts
- Health and wellbeing
- Languages
- Mathematics
- Religious and Moral Education (RERC in denominational schools)
- Sciences
- Social Studies
- Technologies.

Each subject curriculum for the age-range 3-15 is described in terms of a progressive framework of 'experiences and outcomes' (known in shorthand as Es&Os). The outcomes are exemplified in 'I can' statements, that together identify the knowledge, skills and values that learners are expected to have acquired by the end of four phases of education: Early (preschool years and Primary 1), First (to the end of P4), Second (to the end of P7, i.e. to the end of primary schooling), Third and Fourth[19] (S1 to S3,

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[19] Third and Fourth apply to S1 to S3, depending on a pupil's progress and ability – the Fourth Level Es&Os mostly refer to highest order skills and/or more advanced knowledge, and imply independent working.

lower secondary education). Here are just three illustrative examples of different outcomes in reading literacy development: 'I enjoy exploring events and characters in stories and other texts, sharing my thoughts in different ways' (Early Level); 'To show my understanding across different areas of learning, I can identify and consider the purpose and main ideas of a text' (First Level); 'I can select and use the strategies and resources I find most useful before I read, and as I read, to monitor and check my understanding' (Third Level).

Learners' health and wellbeing as well as development of sound literacy and numeracy skills are considered integral to progress in all areas of the curriculum. Described as 'aspects across learning', responsibility for health and wellbeing, literacy and numeracy is therefore assigned to all teachers at all levels of education, whatever their subject specialism.

5.2.1 Quality of preschool

While early childhood education has long been neglected as a public issue, nowadays early childhood education and care (ECEC) has been recognized as important for:

> ... better child well-being and learning outcomes as a foundation for lifelong learning; more equitable child outcomes and reduction of poverty; increased intergenerational social mobility; more female labour market participation; increased fertility rates; and better social and economic development for the society at large. (OECD 2012, p.9)

In all European countries, pre-primary education is an important part of political reflection and action (Naumann et al. 2013).

The EU High Level Group of Experts on Literacy stated:

> Increasing investment in high-quality ECEC is one of the best investments Member States can make in Europe's future human capital. 'High quality' means highly-qualified staff and a curriculum focused on language development through play with an emphasis on language, psychomotor and social development, and emerging literacy skills, building on children's natural developmental stages. (HLG 2012, p.59)

While there is no international or Europe-wide agreed concept of ECEC quality, there is agreement that quality is a complex concept that has different interrelated dimensions. In this report we offer some data concerning structural quality, but there is a lack of research and data about process quality, practices in ECEC institutions, the relation between children and teachers, and what children actually experience in their institutions and programmes.

Preschool teachers' qualifications

The Early Years Framework (Scottish Government 2008b) attempted to reconceptualise early years provision, in particular by redefining early years as pre-birth to 8 years of age. National Practice Guidance[20] (Scottish Government 2014) subsequently moved away from the name 'pre-school education' to a more inclusive title Early Learning and Childcare (ELC), thereby replacing all previous terminology related to pre-school provision and early education. ELC encompasses the range of provision available: local authority schools and settings, Gaelic medium settings, private settings, voluntary groups and childminders. The same document advised that the term 'Practitioners' should encompass all staff and adults working with children under 5 years of age. Mention is also made of the

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[20] http://www.gov.scot/Resource/0045/00458455.pdf.

subtle differences between ELC and ECEC (Scottish Government 2014, p.9), a common term used in some other European countries (Naumann et al. 2013).

The diversity of ELC settings is reflected in differences in work environments, qualifications, recruitment and retention and career progression (Naumann et al. 2013, Chapter 2; Scottish Government 2014; Siraj & Kingston 2015). Even within pre-school settings traditionally managed by local authorities, staff fulfil different roles and are likely to possess very different qualifications (European Commission/EACEA/Eurydice/Eurostat 2014, p.95). Scottish Government statistics (2015a) suggest that three quarters of children in eligible ELC centres had access to a teacher (i.e. professionally qualified and registered with the General Teaching Council for Scotland) under a regular arrangement. This figure is inclusive of the small percentage (3%) in centres with only occasional or ad hoc access to a teacher.

Where a teacher is deployed, s/he (3% of the workforce are male) will have completed a four-year undergraduate programme combining education and another discipline, or gained a Post-Graduate Diploma in Education after an initial four-year degree course (GTCS 2015). Career-long professional learning is now obligatory (GTCS 2012b).

It is, however, care staff and assistants who generally prepare activities and work directly with children (see European Commission/EACEA/Eurydice/Eurostat 2014, Figure 2, p.97). Qualifications vary: nursery nurses will have qualifications in Early Years Care at SVQ level 3 as a minimum and, while nursery assistants require no formal qualifications, SVQ level 2 in Early Years Care and Education is considered appropriate[21]. However, managers of ELC centres are now required to hold a degree in Childhood Practice.

The independent review of the ELC and Out of School (OSC) workforce (Siraj & Kingston 2015) recommended a long-term programme supporting professional development, qualifications and training to ensure that early years professionals have the requisite skills to focus on and enhance children's learning as well as childcare.

> **Challenge:** Even given the entitlement to increased hours for all children following their third birthday and for younger children in special circumstances, the diverse nature of the workforce in the pre-primary sector, and the varying quality of learning experiences provided, could increase inequity rather than reduce it.

Preschool language and literacy curriculum

The design of the preschool curriculum is an important aspect of overall quality. It takes into consideration that young children have learning needs that are sometimes different from those of school-age children. Fostering the development of emergent literacy skills through playful activities is an important function of pre-school institutions, providing a foundation for formal literacy instruction in primary school. Key components are oral language development, including vocabulary learning and grammar, familiarisation with the language of books (e.g. through hearing stories read and told), being engaged and motivated in literacy-related activities, experiencing a literacy-rich environment, developing concepts of print, and language awareness (for more information see the frame text of country reports).

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[21] http://www.gov.scot/Publications/2002/04/14534/2764.

Curriculum for Excellence (CfE) is intended to be a coherent curriculum enabling progression in learning for learners aged 3-18 and building the foundations for life-long learning. Within this curriculum structure, literacy is defined as 'the set of skills which allow an individual to engage fully in society and learning through the different forms of language, and the range of texts, which society values and finds useful' (Literacy and English Principles and Practice papers, LTS 2009, p.1). The experience and outcomes expand on this and illustrate how it might be achieved. 'Experiences and Outcomes' (Es&Os) for Early Level (pre-school through to the first year of primary education – P1) take account of emergent literacy.

Literacy and English in CfE includes oral language development through Listening and Talking Es&Os. These Es&Os are grouped together within five organisers: Enjoyment and choice; Tools for listening and talking; Finding and using information; Understanding, analysing and evaluating; and Creating texts (text being defined in CfE as 'the medium through which ideas, experiences, opinions and information can be communicated' (Literacy and English Principles and Practice, LTS 2009, p.5). At Early Level, Reading and Talking and Listening Es&Os are intended to support language development and understanding of grammar.

Young children in Scotland are introduced to the language of books through activities and tasks based on Es&Os for Reading, and Listening and Talking. These include listening to and reading stories, exploring plot and character, and sharing their thoughts, as well as using what they've learned to create their own stories, e.g. 'I enjoy exploring events and characters in stories and other texts' and 'I use what I learn to invent my own, sharing these with others in imaginative ways' (LIT 0-9b/LIT 0-31b, LTS 2009).

At Early Level in particular, there is strong emphasis in the Scottish curriculum on building the foundations for life-long learning by motivating and engaging young learners. Active learning is considered key (Scottish Executive 2006b; Scottish Government 2008b) and many of the Literacy and English Es&Os begin with the words 'I enjoy exploring...' (LTS 2009), prompting learning experiences which promote discovery, personalisation and choice, providing a stimulus for learning which motivates learners.

The Scottish curriculum covers the age range 3-18 and is intended to ensure coherence and progression and build skills for learning, life and work from the outset. Guidance contained in the Principles and Practice papers for literacy and English (LTS 2009) is intended for all staff working with learners aged 3-18. In common with staff working in the primary and secondary sectors, there is an expectation that early years practitioners will provide a literacy rich environment within all curriculum areas:

> In planning for learning in any curriculum area it is important for practitioners to ensure that children and young people encounter a wide range of different types of text in different media. As they progress in their learning, children and young people will encounter texts of increasing complexity in terms of length, structure, vocabulary ideas and concepts. (LTS 2009, p.4).

Early language and literacy screening and training

CfE provides a framework of what should be possible at different stages in education, and the areas of learning considered to be of highest importance. The Es&Os provide a structure for learning, and

annotated exemplification has been published online[22] to support practitioners' professional judgements.

All children receive a health review at between 27 and 30 months, during which the Sure Start Language Measure[23] is used to assess children's language development and identify children who may benefit from further investigation or support. Reported national data (Scottish Government 2015b) indicates that the most common reason for referral was difficulty with speech and language, amounting to 10% of all new referrals.

5.2.2 Primary school curricula

Because CfE provides a coherent and progressive structure for learning from 3-18, much of the information provided above for pre-school also applies to the primary school curriculum, in particular the recognition that all practitioners have a contribution to make in developing and reinforcing literacy skills through the activities they plan, and through their interaction with children and young people. Guidance on CfE Literacy and English states:

> Whatever the sector, whatever the subject, young people will be: engaged in talking together to deepen their learning; working together to prepare for reading unfamiliar texts; reading a wide range of texts to gather and analyse information for a range of purposes; writing clear explanations; communicating information or opinions. (LTS 2009, p.3)

The Literacy and English curriculum includes a focus on the language and structures of literature, and includes texts which exemplify Scotland's literary and linguistic heritage.

Following identification of a need for more strategic guidance, inter-authority literacy hubs have been developed. Central funding has enabled five local authorities recognised for 'sustained, proactive and authority wide approaches to raising literacy levels' (Christie et al. 2014; Scottish Government 2015c) to showcase their work to other local authorities and national bodies. A total of 22 local authorities were involved in the hubs. Although no longer in receipt of funding support, the hubs continue to share approaches and resources with other authorities.

Reading for pleasure

As with pre-school, the curriculum through all stages of primary schooling encourages personal choice and reading for pleasure e.g. 'I regularly select and read, listen to or watch texts which I enjoy and find interesting and I can explain why I prefer certain texts and authors.' (LIT 1-11a/LIT 2-11a, LTS 2009).

Reading instruction

While most literacy researchers have clear concepts about effective literacy instruction, little is actually known about what goes on in classrooms day-to-day in many European countries. In order to describe the practice of reading instruction we would need extensive observational studies, but such studies are virtually non-existent. There is a noteworthy shortage of data on actual reading instruction in school. Only PIRLS offers some data for primary schools, albeit based on self-reports by teachers (which might not be entirely valid).

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[22] www.educationscotland.gov.uk/learningandteaching/assessment/supportmaterials/nar.
[23] www.govscot/Publications/2012/12/1478/9.

In a latent class analysis using PIRLS 2006 data, Lankes and Carstensen (2007) identified 5 types of instruction in the teachers' self-reports:

Type 1: Teacher-directed instruction in the whole class without individual support

Type 2: Individualized child-centred instruction, seldom whole-class instruction

Type 3: Whole-class instruction with little cognitive stimulation and little variety in methods, without individual support

Type 4: Variety of methods with high individual support

Type 5: Highly stimulating whole-class instruction with didactic materials.

There were significant differences between countries in terms of instructional approach (Figure 5.1), the predominant approaches in P5 in Scotland being instructional types 2 and 4: *viz*. 'individualized child-centred instruction (seldom whole-class instruction)' and 'variety of methods with high individual support'. This description characterises the general teaching approach in this country throughout the primary school.

Figure 5.1: Distribution of Types of Reading Instruction (PIRLS 2006 data)
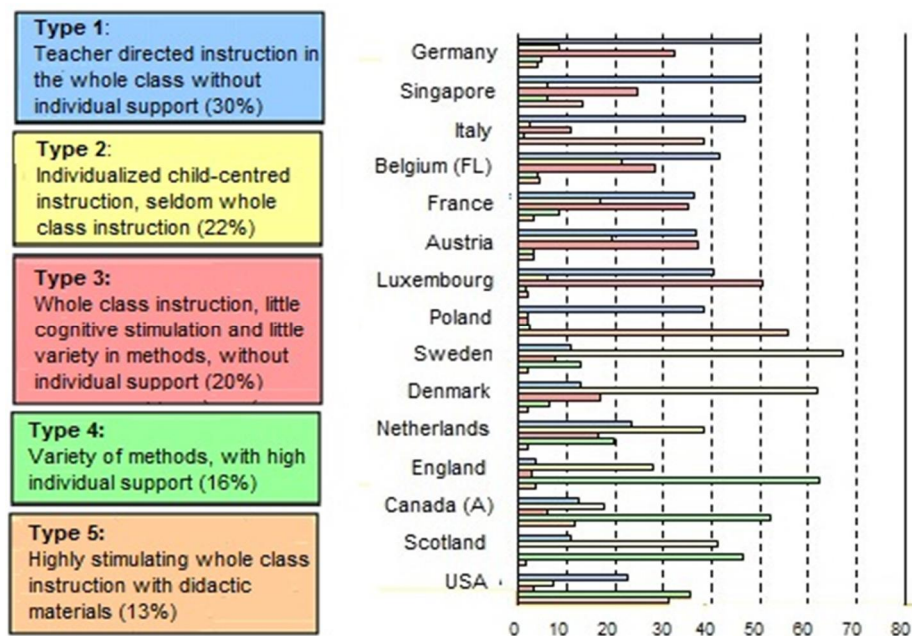
Source: Adapted from Lankes & Carstensen 2007

Content of literacy curricula

The Eurydice report Teaching Reading in Europe offers a broad range of information about the content of reading literacy curricula and official guidelines (European Commission/EACEA/Eurydice 2011). In order not to duplicate this work only two aspects are addressed in the ELINET country reports whose importance might not yet be acknowledged and therefore might be missing in the literacy curricula and official guidelines: explicit instruction of grapheme-phoneme correspondences (phonics), and reading strategies.

As already noted, the Curriculum for Excellence Es&Os are the basis for planned learning and teaching in Scottish schools. Across the three primary stages covered by First Level (P2-P4), children are

expected to be working towards the outcome: 'I can use my knowledge of sight vocabulary, phonics, context clues, punctuation and grammar to read with understanding and expression' (LTS 2009: ENG 1-12a). Across P4-S3, an increasingly sophisticated response is required: 'Through developing my knowledge of context clues, punctuation, grammar and layout, I can read unfamiliar texts with increasing fluency, understanding and expression' (ENG 2-12a, ENG 3-12a, ENG 4-12a).

Teachers in the first year of primary are able to evaluate the early literacy environment they provide, using POLAAR (the Primary 1 Literacy and Action Resource, Education Scotland[24]). This details end goals for key aspects of literacy development – letter naming and sound identification, phonological awareness, phoneme decoding, word recognition, etc. – and indicates the nature of instruction required.

While literacy instruction in the early years tends to be more focused on code-based skills, in later stages it is important to develop and foster a wide range of comprehension strategies with all children. Explicit teaching of comprehension strategies is effective for improving reading comprehension among readers with different levels of ability. These strategies include (European Commission/EACEA/Eurydice 2011, p. 55):

- Drawing inferences or interpretations while reading text and graphic data
- Summarising text and focusing selectively on the most important information
- Making connections between different parts of a text
- Using background knowledge
- Checking/monitoring own comprehension
- Constructing visual representations
- Pupils reflecting on their own reading process.

A review of steering documents pre-2011 found that three of these strategies, viz. 'summarising text', 'using background knowledge' and 'constructing visual representations', were not explicit in literacy curricula in Scotland (European Commission/EACEA/Eurydice 2011, p.60, Figure 1.4).

Because the CfE Es&Os now form the basis for planning learning in Scotland, classroom tasks and activities reflect the fuller range of reading strategies: see, for example, Reading Es&Os within the following organisers: Tools for Reading, Finding and Using Information, Understanding, Evaluating and Analysing. The Writing organisers include Tools for Writing, Organising and Using Information, and Creating Texts. A Skills in Practice online resource[25] is intended to support teachers to embed pupils' skills development in day-to-day classroom practice. This interactive resource covers a range of subjects from CfE Early Level to Third Level and focuses in particular on higher-order skills such as analysis, evaluation, synthesis and system thinking.

5.2.3 Literacy curricula in secondary schools

In the first three years of secondary school (S1-S3), as students continue to follow the Broad General Education (BGE), lessons continue to focus on the significant aspects of learning contained within the CfE Es&Os, which include both English and literacy across learning (i.e. the literacy required to learn and achieve success in other curriculum areas). In S4 students enter the 'Senior Phase', and begin to study for National Qualifications (NQs). At this stage the level of study (for most students in mainstream education, National 4 or National 5) is determined by teachers' judgment of prior learning

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[24] www.educationscotland.gov.uk/resources/s/skillsinpractice/introduction.asp.
[25] www.sqa.org.uk/sqa/58062.html.

in the BGE and predicted capability. NQ courses have been designed to articulate in principle with significant aspects of learning identified for the BGE, although there is no direct correlation between individual Es&Os and the NQ outcomes.

Since the introduction of the new curriculum, secondary school teachers of whatever discipline, and at all levels, are now expected to contribute to the further development of students' literacy (and numeracy) skills. Unlike their colleagues in the primary sector, where class teachers have traditionally covered most areas of the curriculum with their students, the inclusion of literacy and numeracy as key components within their subject area has been a new requirement for many secondary subject teachers.

Questionnaire enquiries within the SSLN explored teachers' readiness for this new role. Primary teachers, secondary English teachers and secondary non-English teachers (mathematics, science, expressive arts, social studies, etc.) were asked how confident they felt that they understood five key aspects of CfE. Figure 5.2 shows the results for 'very' or 'fairly' confident for the teaching of literacy, numeracy, and health and wellbeing across learning.

Figure 5.2: Confidence for teaching key aspects of CfE across learning (SSLN 2014 data)
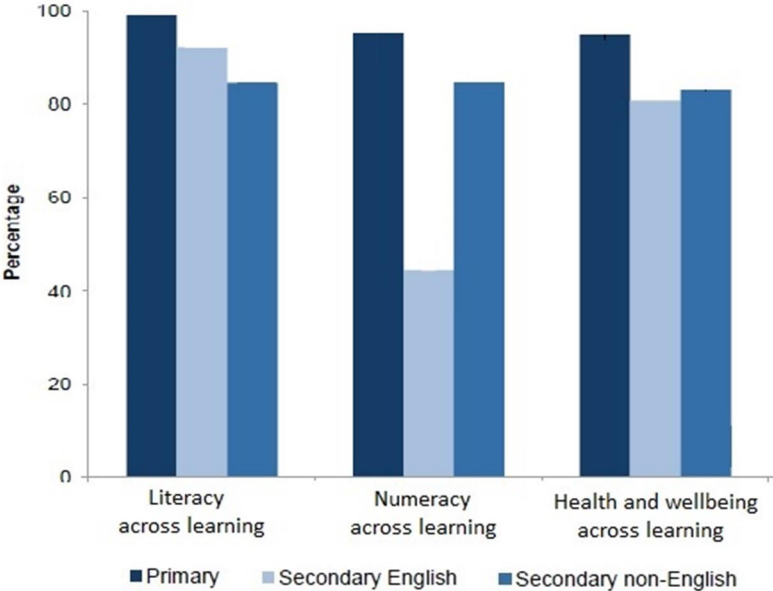
Source: Adapted from Scottish Government (2015b, p.39)

Confidence was highest among primary teachers, with over 95% of this group claiming to be very or fairly confident in all three areas. Secondary teachers of subjects other than English were in general the next most confident group, with over 80% claiming to be very or fairly confident in each case: within this group, proportions varied most when it came to numeracy, with over 90% of mathematics, science and technology teachers claiming high levels of confidence in their numeracy understanding compared with just over 70% of arts and languages teachers. Among the secondary English teachers, on the other hand, while confidence was high for literacy (over 90% claiming to be fairly or very confident) and for health and wellbeing (around 80%), the same could not be said for numeracy, for which the proportion claiming to be very or fairly confident fell to below 45%.

When asked about their practice, secondary non-English teachers from all curriculum groupings reported that they regularly found opportunities to reinforce students' literacy skills. Over three-

quarters of teachers in each curriculum area reported that they did this in most lessons or most weeks. The results were in line with those that emerged in the literacy survey one year earlier in 2012.

Challenge: Secondary teachers are less confident than primary teachers about their ability to teach literacy, numeracy, and health and wellbeing in their subject classes; secondary English teachers are very much less confident about teaching numeracy than literacy.

5.2.4 Early identification of and support for struggling literacy learners

Effective assessment tools upon entry to primary school will help teachers identify literacy skills from the very beginning of formal education. Regular formative assessment throughout primary school will ensure that literacy problems do not continue to go unrecognised, and that students receive the support they need through education that matches their learning needs. This should prevent children leaving school with unrecognized literacy problems (HLG 2012, p.67).

Standards as a basis of assessment of reading difficulties

Standards of reading achievement allowing teachers, parents and school leaders to understand the rate of progress of learners and to identify individual strengths and needs should be integrated in the curriculum and should be the basis of assessments. The High Level Group pointed out that there is a need to establish minimal standards of literacy achievement (benchmarks) for each grade, and to administer regular tests based on these standards, to allow for identification of struggling readers/writers (HLG 2012, p.43).

All EU countries have defined learning objectives in reading to be reached at the end of primary and secondary education cycles. However, only a few Member States have detailed standards (benchmarks) at each grade (school year) which form the basis of assessments allowing for early identification of reading difficulties and subsequent allocation of attention and resources. These standard-based assessments allow teachers and school leaders to judge children's progress and to target additional reading support.

The Curriculum for Excellence Es&Os describe broad outcomes of achievement for each level but these do not provide detailed standards. Nor are there benchmarks for each school year, as these broad outcomes outline only what is expected of learners at the end of the three-year period of working within a Level. Quality assured exemplification in the form of teachers' learning intentions, success criteria, and teacher-annotated students' responses is available to staff via the online National Assessment Resource[26], intended to support teachers to appreciate what constitutes successful learning at different stages within a level (the level covering three years of study). Resources based on SSLN findings have also been produced to support teachers' understanding of standards.

Advice and guidance for both the Broad General Education and the new National Qualifications encourages teachers to make use of a range of evidence gathered in the course of normal planned classroom activities and subject to agreement through local moderation activities. Assessment throughout the BGE is based on teachers' professional judgement as is assessment in National Qualifications at the level of National 4. Subsequent qualification levels include an externally assessed examination element.

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[26] http://www.educationscotland.org.uk/learningandteaching/assessment/supportmaterials/nar/.

The centrally-funded Assessment is for Learning programme[27] (AifL 2002-07) aimed to achieve a coherent system of assessment (for children 3-14) with closer alignment between assessment for learning, assessment of learning, and assessment for accountability. This work is acknowledged in the guidance on implementation of the curriculum (LTS 2009) and on assessment within it (Scottish Government 2010c; Education Scotland 2012b). This re-emphasises the importance of ongoing assessment, which involves learners and supports learning, with teachers' professional judgement used periodically to sum up progress and inform future learning. Implicit in this is an encouragement to staff to share learning intentions and success criteria, modelling how to respond through quality feedback, thereby giving learners both the vocabulary and the opportunity for peer and self-assessment. Formative assessment is also implied in the encouragement to make use of professional judgments to determine next steps.

Screenings for reading competence to identify struggling readers

The Primary 1 Literacy Assessment and Action Resource (POLAAR), mentioned in Section 5.2.2, is intended to support teachers and support staff to identify learners in the first year of primary school who are at risk of developing difficulties with their reading (and writing). POLAAR is based on research into key factors underpinning successful literacy development, and comprises a software package containing a number of questionnaire-based resources to assess children's literacy ability.

A revised and updated Addressing Dyslexia Toolkit[28] is available to support the identification of specific difficulties.

Supporting struggling literacy learners

A raft of legislation, national policy and policy support documents and resources are intended to ensure all learners have appropriate support to meet their needs. For example, the concept of additional support needs was established in the Education (Additional Support for Learners) (Scotland) Act of 2004 (Scottish Executive 2004b), which placed new duties on education authorities to provide for children with additional support needs (ASN), and introduced coordinated support plans. With the introduction of the new curriculum, one of the six 'entitlements' for children and young people (Scottish Government 2008c) concerns a right to personal support as and when required, in order that all learners may have the best chance of experiencing success in their learning. The main thrust of 'Getting it Right for Every Child' (GIRFEC) (Scottish Government 2008d) was the importance of early or primary intervention as opposed to crisis intervention, but crucially it paved the way for improved collaboration among the different agencies in order to facilitate appropriate support to give each child the best possible start in life.

Indeed, since its publication the GIRFEC approach has underpinned the work of all those who work in Scottish education. More recently, the wide-ranging Children and Young People (Scotland) Act 2014 (Scottish Government 2014) legislates that each child should be allocated a Named Person responsible for coordinating support and liaising with parents and carers to agree and arrange support. For young people who will need considerable help or help from a number of agencies the Act also provides for a Child's Plan, setting out the reason for the plan, the type of support needed, and how long support should be provided. The aim of national policy and legislation is to encourage early identification of difficulty (including literacy difficulties) and lead to appropriate support.

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[27] http://www.gov.scot/Resource/Doc/69582/0017827.pdf.
[28] www.dyslexiascotland.org.uk/addressing-dyslexia-toolkit.

Proportion of struggling readers receiving remedial instruction

The measures detailed in the section above are intended to ensure that needs are identified and appropriate support put in place. Yet PIRLS 2006 suggested a shortfall in support provided, reporting that in that year 13% of sample students in Scotland were identified as having reading difficulties (three percentage points lower than the EU-21 Average) while only 10% were actually in receipt of 'remedial instruction'. Interestingly, the percentage of pupils actually receiving support in 2006 is the same as the proportion of very young children in Scotland identified in the 27-30 month Health Check eight years later as likely to require language support (NHS 2014).

Kinds of support offered

It is crucial that teachers provide support measures to help struggling readers. European countries differ widely in their approaches, from in-class support with additional support staff (reading specialists, teaching assistants or other adults) working in the classroom together with a teacher, to out-of-class support where speech therapists or (educational) psychologists offer guidance and support for students with reading difficulties.

A report on the provision for learners with dyslexia in Scottish schools (Education Scotland 2014a) found that all local authorities had staged intervention to meet additional support needs, and that, in some, the identification of dyslexia was embedded in the authority's literacy strategy. It reported also that all local authorities have guidance and policies on dyslexia and 'increasingly specific dyslexia "pathways" are being introduced to assist staff to make appropriate provision' (p.10). The Review also found an expanded range of computerised assessments, interventions and support. Software functions were mainly voice recognition, text-to-voice and word processing, but increasingly schools and local authorities were working with CALL (Communication, Access, Literacy and Learning) Scotland[29] to provide support through technology.

In-class support is advised, where possible, through: differentiated tasks, materials, media and level of support from peers, teacher or a learning assistant; multi-sensory approaches; use of the dyslexia-friendly schools framework; specific phonological awareness; structured spelling programmes, adaptations to classroom environment and alternative approaches to learning and teaching; scaffolding to help structure writing; adaptations to text, use of graded readers with age-related content.

For children in Scotland with coordinated support plans, a range of specialists provide a variety of support.

Support for struggling readers – a legal right?

In Scotland the right to support is implicit in the range of current legislation and national policy, to help ensure the most positive outcomes in later life. Reflecting the United Nations Convention on the Rights of the Child, every young person in Scotland is said to have the right to play, to be heathy and happy, and to be nurtured, and the GIRFEC approach based on the SHANARRI indicators (safe, happy, achieving, nurtured, active, respected, responsible and included) thread through all services that involve children and young people of any age.

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[29] www.callscotland.org.uk

The six curriculum entitlements already referred to re-inforce this message (Scottish Government 2008c), with particular emphasis on inclusion and achievement: 'every child and young person is entitled to a Broad General Education' (p.14) and 'to personal support to enable them to gain as much as possible from the opportunities which Curriculum for Excellence can provide' (p.17). Also relevant to this report: 'every child and young person is entitled to develop skills for learning, skills for life and skills for work, with a continuous focus on literacy, numeracy and health and well-being' (p.15).

5.2.5 Initial Teacher Education (ITE)

Teaching Scotland's Future, a comprehensive review of teacher education in Scotland commissioned by the Scottish Government, states that 'the two most important factors which promote excellent education are the quality of the teaching profession and of its leadership' (Donaldson, 2011, p.82). Identifying strategic priorities for the future, Donaldson offered 50 recommendations to further develop the quality of the teaching profession and its leadership.

Two of these recommendations concerned changes to the pre-existing Teacher Education Standards. Recommendation 35 was to revise the Standards to create a coherent overarching framework 'reflecting a reconceptualised model of teacher professionalism', while Recommendation 36 highlighted the need to develop a new Standard for Active Registration to 'clarify expectations of how fully registered teachers are expected to continue to develop their skills and competences' (Donaldson 2011, p.95).

Accepting the recommendations, the General Teaching Council Scotland (GTCS)[30], the relevant Professional Statutory Body for Scotland, which sets the Standards for teachers in all levels of education, engaged in an extensive consultation with the profession and other stakeholders (for details see Hamilton 2014). The revised Standards that emerged were:

- The Standards for Registration (Provisional, Full) (GTCS 2012a)
- The Standards for Career-Long Professional Learning (GTCS 2012b)
- The Standards for Leadership and Management (Middle Leadership, Headship) (GTCS 2012c)

Hamilton (2014, p.50) describes the GTC Scotland model of trained beginning teachers that underpins the Teacher Education Standards as individuals who:

- have professional values
- are reflective and innovative
- are experts in pedagogy
- are agents of change rather than recipients of it
- are autonomous while recognising their place within systems
- have commitment, resilience and high levels of self-efficacy
- have appropriate subject content and pedagogic content knowledge
- are accountable and consider the impact of their teaching on pupils and learners
- know about research and scholarship and where appropriate actively practise research
- are committed to their own ongoing professional development
- are aware of education's links to other fields
- are committed to working with other professionals within and beyond education.

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[30] www.gtcs.org.uk.

ITE entry requirements and length of training

Initial teacher education in Scotland is provided by the eight universities in Scotland in partnership with schools and local authorities, through programmes accredited by GTC Scotland (GTCS 2013), which sets minimum standards for student admission (GTCS 2015). There are three different routes to becoming a primary teacher (GTCS 2015, p.3):

- a four-year undergraduate combined degree programme leading to a named award which includes a teaching qualification;
- a four year undergraduate concurrent degree programme leading to a named award and a separate teaching qualification; or
- a post-graduate diploma in education (PGDE) programme following a degree.

A teaching qualification for secondary education is awarded in a particular subject after successful completion of one of the following:

- a four-year course leading to a B.Ed. degree in music, physical education or technological education;
- a combined degree or concurrent degree which includes studying a subject, studying education and participating in school experience; or
- a PGDE programme following a degree in a specific subject (p.4).

The qualifications needed for entry to teacher education are set out in terms of the 12 levels and associated credit values defined in the Scottish Credit and Qualifications Framework (SCQF 2012). A National Qualification Course award in English at SCQF Level 6 (Higher Grade English or an accepted alternative) is an essential requirement for entry to all teacher education programmes. A National Qualification Course award in Mathematics at SCQF Level 5 (National 5 Mathematics or an accepted alternative) is an essential *minimum* requirement for entry to all teacher education programmes. Individual universities will impose additional requirements, depending on the popularity of their courses and the school sector candidates intend to qualify to work in.

There is considerable variation in Europe in terms of the duration of in-school placements in ITE: for prospective primary teachers, the time ranges from 40 hours in Latvia to 900 hours in Austria (European Commission/EACEA/Eurydice 2011, Fig. 2.6, p.102). In Scotland, the length of placement is measured in weeks and is dependent on the course. For example, the combined degree route (both sectors) requires 30 weeks of school placement experience, although B.Ed. (Technology) students have the option of spending 6 of the 30 weeks on placement in an industrial, commercial or service organisation. In contrast, school placement experience in the concurrent degree 'must be at least equivalent to the 18 weeks required for the PGDE' (GTCS 2013, p.5). In the case of the PGDE, 18 weeks is approximately 50% of the course.

Teaching is an all-graduate profession in Scotland, but most primary school teachers have traditionally undertaken degree courses with an emphasis on education, whereas the majority of secondary teachers qualify as teachers through the PGDE following a degree in a subject specialism. The difference has, in the past at least, created tension, with secondary teachers critical of primary teachers' subject knowledge and primary teachers critical of a lack of knowledge and understanding of pedagogy where their secondary counterparts have undertaken a year-long course leading to the PGDE. It may also be true to say that the focus for most secondary teachers is on their subject, an issue which raised its head when the new curriculum was introduced and responsibility for literacy,

numeracy and health and wellbeing was assigned to every teacher, including those in secondary schools – irrespective of subject domain.

> **Challenge:** Secondary teachers require support if they are adequately to meet their new responsibilities to contribute to the development of their students' literacy and numeracy skills, and awareness of health and wellbeing, within their own subject teaching.

Registration as a qualified teacher

The Standards for Registration (GTCS 2012a) are mandatory requirements that all intending teachers in Scotland must meet, whether these individuals undertook their initial teacher training in Scotland or elsewhere. For Scottish trained teachers, Provisional Registration is awarded on completion of a GTCS accredited university programme of Initial Teacher Education (ITE), with Full Registration following successful completion of a probationary period, normally one year within Scotland's Teacher Induction Scheme[31] (for teachers who qualified outside Scotland see www.gtcs.org.uk for registration information).

The Teacher Induction Scheme is a national induction programme for newly-qualified Scottish-trained teachers. It guarantees the offer of a one-year teaching post in a Scottish local authority, with teachers being allocated to one of five local authorities of their choosing. Teachers on the programme have a maximum class commitment time equal to 82% of that of a full-time teacher, allowing additional time to be devoted to their professional development. All have access to the services of an experienced teacher as a mentor.

Once Full Registration is achieved, the Standard for Full Registration remains as the baseline Standard for competence which all teachers have to continue to maintain through their career.

The role of literacy expertise in Initial Teacher Training

In Scotland and the rest of the UK, as in France and Sweden, the development of students' literacy skills has been designated a cross-curricular task in the national curriculum, and all newly-qualified teachers are expected to be able to develop such skills, not only language teachers (European Commission/EACEA/Eurydice 2011, p. 99).

Key to improving standards of literacy in Scottish schools is the recommendation that those hoping to teach children in Scottish schools should themselves demonstrate sound literacy and numeracy skills:

> … candidates for teaching should undertake diagnostic assessments of their competence in both literacy and numeracy. The threshold established for entry should allow for weaknesses to be addressed by the student during the course. A more demanding level should be set as a prerequisite for competence to teach. (Donaldson 2011, p.5)

5.2.6 Continuing Professional Development (CPD)

Time frame and quality standards of CPD

Since 2001[32], all teachers in Scotland have been contractually obliged to complete a minimum of 35 hours CPD per year. Acknowledging that this had been a step in the right direction, Donaldson (2011)

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[31] For teachers who qualified outside Scotland see www.gtcs.org.uk for registration information.
[32] A teaching profession for the 21st century: agreement reached following recommendations in the McCrone report http://www.gov.scot/Resource/Doc/158413/0042924.pdf.

recommended that education policy in Scotland should aim to strengthen the quality of its teachers and of its educational leadership through improved CPD as well as enhanced initial teacher education programmes

Teacher education is now envisaged as operating 'as a continuum, spanning a career and requiring much better alignment across and much closer working amongst schools, authorities, universities and national organisations' (Donaldson 2011, p.85), expected of all fully registered teachers, irrespective of where they were employed or the stage in their career. This addresses a concern that, as budgets and responsibility for CPD increasingly shift from local authorities to schools, the availability and quality of ongoing professional development can be dependent on the employment context.

Referring to the perceived benefits of collaboration and communities of enquiry, the report recommends that 'the balance of CPD activities should continue to shift from set-piece events to more local, team-based approaches which centre around self-evaluation and professional collaboration, and achieve an appropriate blend of tailored individual development and school improvement' (p.96).

Following the publication of this report and the review of existing arrangements for ITE, teachers' CPD and leadership training, a suite of revised professional standards was introduced (GTCS 2012a, 2012b, 2012c). Accompanying the Revised Standards for Full Registration (GTCS 2012a), the Revised Professional Standards for Career-long Professional Learning (CLPL) (GTCS 2012b) contain an expectation that 'teachers will continue to develop their expertise and experience across all areas of their professional practice' throughout their teaching career (GTCS 2012b, p.2). These standards are said to describe 'advanced professional knowledge and pedagogical expertise' (p.4) and are intended to support teachers to 'develop as reflective, accomplished and enquiry professionals who are able to engage with the complexities of teaching and learning...' (p.4). They address three aspects:

1) Professional values and commitment
2) Professional knowledge and understanding, professional skills and abilities
3) The professional actions in career-long professional learning.

Thus, teachers are required as part of their ongoing learning to build their understanding of pedagogy, learning and subject knowledge as well as curriculum and assessment, enquiry and research, and educational contexts and current debates in policy, education and practice, reflecting the recommendation that:

> ... teacher education should ... address the need to build the capacity of teachers, irrespective of career stage, to have high levels of pedagogical expertise, including deep knowledge of what they are teaching; to be self-evaluative; to be able to work in partnership with other professionals; and to engage directly with well-researched innovation. (Donaldson 2011, p.84)

To ensure a continuous focus on quality in teaching, Donaldson recommended that teachers have access to high quality CPD relevant to their subjects and responsibilities, and suggested that formal accreditation would assure quality.

The prevalence and nature of CPD in Scotland

Teachers in Scotland must participate in *Professional Update*[33] to ensure continuing registration. This involves:

- An annual update of contact information (address and personal details) to GTC Scotland
- A career-long commitment to, and engagement in, professional learning, including continuing engagement in PRD [professional review and development]
- Engagement in ongoing self-evaluation against appropriate GTC Scotland Professional Standards
- Discussion of this engagement and the impact of this, as part of the PRD process
- Maintenance of a reflective record of professional learning and associated evidence of its impact
- 5-yearly confirmation of engagement in the Professional Update process with GTC Scotland (the Professional Update sign-off).

Time spent on professional development related to literacy

Since the introduction of CfE, many local authority CPD programmes have focused on reading literacy to support the implementation of new curricula, and schools have tended to focus on literacy or numeracy in scheduled collegiate time. Teachers and schools are encouraged to make use of self-evaluation to identify and inform their priorities for improvement.

It is not possible to quantify how much time has been spent on literacy development as there is currently no provision for compulsory professional development which focuses on literacy. However, an enquiry within the 2014 SSLN literacy survey produced some relevant information on this point. Teachers were asked to report on their (formal and informal) CLPL activity in the area of literacy over the previous 12 months (Scottish Government 2015b, p.40). The majority (85%) of responding primary teachers and secondary English teachers, and 60-70% of secondary non-English subject teachers, reported that they had taken part in sharing standards and moderation, reading and discussing the CfE literacy Es&Os with colleagues, and engaging in professional enquiry through reading/personal study. Over half the primary teachers and 30-50% of the secondary non-English teachers rated the impact of their activities as high or very high. Among responding secondary English teachers over 70% rated sharing standards and moderation as having this level of impact. Attending local or national conferences was the least recorded activity for all groups and the one with the lowest impact.

> **Challenge:** A current need is to improve the quality and participation rates of continuing professional development targeted at building the literacy expertise of teachers.

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[33] http://www.gtcs.org.uk/professional-update/about-professional-update.aspx

5.3 Increasing participation, inclusion and equity

The High Level Group of Experts on Literacy drew attention to persistent gaps in literacy, namely the gender gap, the socioeconomic gap, and the migrant gap (HLG 2012, pp.46–50). These gaps derive from the reading literacy studies, national and international, that repeatedly show unequal distribution of results among groups of children and adolescents.

The **socioeconomic gap** in literacy refers to the fact that children and adolescents from disadvantaged families have lower mean performance in reading than students from more advantaged families. However, the degree to which family background relates to reading literacy performance varies from one country to another, even within Europe. Family background measured as parents' educational level and/or occupation, or measured as economic, social and cultural status, is one of the most important predictors of reading literacy performance. Family background also explains some of the performance differences between schools.

The **migrant gap** refers to unequal distribution of learning outcomes between native students and immigrant students, who in most countries have lower levels of reading literacy in the principal national language than the native students. In many countries the migrant gap is associated with the socioeconomic gap, but this explains only a part of it, because the migrant gap is also associated with home language differing from the language of instruction at school, which increases the risk of low performance in reading. It is noteworthy that even language minorities with high status in society (and above-average socioeconomic background) show below average performance if the language of school is not supported at home, which signals the importance of a good command of the language used at school.

Another alarming gap in reading literacy in many countries is the **gender difference,** which is more critical for adolescents than for children. In all PISA studies, 15-year-old girls outperformed boys in reading in all the European countries, and boys are frequently overrepresented among the low performers.

To achieve fairer and more inclusive participation in literacy learning we need to close these gaps, which already start in early childhood, by supporting 'at risk' children, adolescents and adults. Students at risk must have access to language screening and flexible language learning opportunities in school, tailored to individual needs. Furthermore, early support for children and adolescents with special needs is necessary.

In the section below we address the following questions:

- Compensating socioeconomic and cultural background factors
- Support for children with special needs
- Promoting preschool attendance, especially among disadvantaged children
- Provision for preschool children with language difficulties
- Support for children and adolescents whose home language is not the language of school.
- Preventing early school leaving
- Addressing the gender gap among adolescents.

This section refers to children and adolescents who for different reasons can be considered as a group "at risk" (from disadvantaged homes, those whose home language is not the language of school, or those with special educational needs). The focus is on preventing literacy difficulties among members of these groups

5.3.1 Compensating socioeconomic and cultural background factors

The child's socioeconomic and cultural background has a strong impact on literacy. Material poverty and educational level, particularly of the mother, are well-recognised main factors influencing literacy. The primary language spoken at home also influences literacy development. The Scottish Government considers addressing poverty, and poverty-related attainment gaps, a high priority (Scottish Government 2011), as do other interested organisations (see, for example, Sosu & Ellis 2014).

Poverty indicators

An indicator of child poverty is the percentage of children living in a household in which disposable income, when adjusted for family size and composition, is less than 50% of the national median income (Adamson 2012, p.3). The child poverty rate in Scotland is around 13%. The range is from 5% in Iceland to 25% in Romania (for an overview of European countries see Table A2 in ELINET Appendix B).

Teenage mothers and single parent families

The percentage of teenage mothers is 6% for Scotland. In 2011 the percentage of children living mainly with a single parent was 7% (Naumann et al. 2013); the range for the European countries participating in ELINET is from 1% in Croatia to 30% in Denmark (for an overview of European countries see Table A5 in ELINET Appendix B).

Migrant parents

According to PIRLS 2006 (Mullis et al. 2007, Exhibit 3.12, p.136), the parents of 6% of the 10-year-olds in Scotland were born outside the country, while 13% of 10-year-olds had one parent born outside the country.

Very low birth weight and severe prematurity

The percentage of live births with a birth weight under 2500 grams in Scotland was just over 6% (Zeitlin et al. 2010, Figure 7.11, p.149). The range is from 3% in Iceland to 9% in Cyprus (for an overview of European countries see Table E1 in ELINET Appendix B). According to the same source (ibid. Figure 7.14, p.155) the percentage of live births with a gestational age <32 weeks was 1.2% in Scotland (with a range from 0.7% in Iceland to 1.4% in Hungary). The percentage of live births with a gestational age between 32 and 36 weeks was just under 6% (with a range from 4% in Lithuania to 7% in Hungary (for an overview of European countries see Table E2 in ELINET Appendix B).

5.3.2 Support for children with special needs

Not only are children from culturally disadvantaged families at risk in their literacy development, so also are those with very low birth weight and severe prematurity, factors that are associated with developmental disabilities, including for reading and writing. Cognitive and sensory disabilities must be considered as well.

The Scottish Government's Early Years Collaborative comprises personnel from social services, health and education as well as representation from the police and voluntary organisations. Its aim is to convert the principles in the Early Years Framework and GIRFEC into practical action. The Collaborative is committed to ensuring that 85% of children will have reached developmental milestones by their 27-30 month review.

Those children with complex needs are likely to have been assessed, and had specialist (e.g. physiotherapist, occupational therapist, speech therapist, paediatrician) involvement from birth. Health visitors carry out regular assessments with young and preschool children and many also have support from a preschool visiting teacher.

5.3.3 Promoting preschool attendance, especially among disadvantaged children

The Early Years Framework (Scottish Government 2008b) reconceptualised early years provision in Scotland and detailed the range of support which should be available for very young children and their families. It promoted better-quality preschool experience.

Subsequently, the Child Poverty Strategy for Scotland (Scottish Government 2011) promoted a child-centred, multi-agency approach to tackling economic disadvantage, which included early intervention and prevention so that families do not fall into poverty. The 2014 revision[34] of the Strategy focused on the same key areas.

The Children and Young People (Scotland) Act[35] (2014) highlights the need for interdisciplinary working to alleviate the impact of poverty, and directs local authorities to focus on the early years. It reasons that investment in early years could reduce the need for intervention later. Importantly, the Bill increases entitlement to nursery education for every child aged three and above (and for younger children in special circumstances) from 450 hours to 600 hours. There are, however, no recommendations about the quality of provision (an issue referred to in an earlier section).

Number of children attending day care and preschool institutions

Scottish Government (2015a) statistics indicate that more than 97,000 children were registered for local authority-funded early learning and childcare in 2015 (see Table 5.1 for figures based on a snapshot of registrations in census week 14-18 September 2015). Of these, the great majority, over 87,000 children, were aged 3 or 4, amounting to just under 97% of children in that age band eligible for local authority funded ELC. The remaining 10,000 or so children comprise: something over 1,000 children under two years of age, around 4,300 children aged 2, and almost 4,500 children eligible for school but whose parents had opted for deferred entry to school (an option for children who have not yet attained their fifth birthday by the start of the school year). The figures could be misleading, however, as children registered to receive ELC at more than one centre may have been counted more than once, resulting in an over-estimation.

Also, as reported in earlier sections, ELC in Scotland involves a range of providers. The numbers cited above reflect this range and do not therefore apply solely to day care and preschool institutions.

5.3.4 Provisions for preschool children with language difficulties

Literacy competence strongly builds on oral language proficiency, word knowledge, and syntactic knowledge. Measures must be taken by governments and institutions to ensure that children with poor language development (second-language speaking children and those from a low socio-cultural background, as well as others who experience difficulty in learning language) acquire adequate levels of oral language in kindergarten, preschool institutions and in school. It should be ensured that at age 4 at the latest all children are diagnosed in their oral language proficiency, and that there are

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[34] www.govscot/Publications/2014/03/5304
[35] www.govscot/Topics/People/Young-People/legislation

obligatory courses for children falling behind in their acquisition of language competence. The aim should be that all children entering school can speak the language of the school so that they can profit from reading instruction.

Screening to identify children at risk in their language

The 27-30 month Health Check provides an early measure for most children of whether or not a preschool child has met his/her developmental milestones.

The Education Scotland POLAAR resource (Primary 1 literacy assessment and action resource) has been referred to in earlier sections, and is available nationally. Its use is said to be increasing across the country. Based on a staged intervention model to help identify what, if any, intervention might be needed, it is designed to help teachers of children in the first year of primary school to identify and assess children who are most at risk of developing later difficulties in reading and writing.

Specialist support for children with delays in their language development

Many specialists are accessed through the National Health Service (NHS). Apart from children with complex needs, children identified in the P1 assessment (POLAAR) as being at risk of developing language difficulties are referred for specialist support (see the Early Years Collaborative mentioned earlier). At this stage, the most common referral is to Speech Therapists who provide resources and take a lead on communication problems.

The POLAAR literacy approach starts on a child's first day at school and teachers are expected to target in-class support appropriately. If within the child's first term at school, he/she appears to be in need of further support, parents/carers should be informed and a programme of support drawn up and delivered on a daily basis. It is intended that children and their parents are at the heart of the programme – the child understands why he/she is getting additional support and the parents are happy that this is happening. Most primary schools have additional needs support assistants who work alongside teachers in the classroom to reinforce lessons previously taught. However, budgetary constraints are having an impact on recruitment and deployment

5.3.5 Support for children and adolescents whose home language is not the language of school

As noted in the OECD's recent country report on Scotland:

> The ethnic minority population of Scotland has grown rapidly over the last decade and diversity in Scottish schools is increasing as a result. …. It is not surprising that many languages are now spoken in Scotland's schools and communities, and 2013 estimates put the number of languages spoken at home of pupils in publicly funded schools at around 140. (OECD 2015, p.28)

Census records show that around 5% of students in Scottish publicly-funded schools had English as an Additional Language (Scottish Government 2015a); this proportion is expected to grow over coming years.

Following the Humanitarian Summit in 2015, a meeting of public sector and third sector organisations from across Scotland to discuss how Scotland might play its part in dealing with the humanitarian crisis, a review was conducted (Education Scotland 2015b) of the structures and approaches which education and other services had in place to provide support to newly arrived children, adults and

young people. The review included reference to two key reports (HMIe 2009; Education Scotland 2014b) and a research study for Scottish Government (Candappa et al. 2007) which highlighted:

- evidence that, through ESOL courses, Scotland's colleges make positive provision for adults arriving in Scotland (Education Scotland 2014b, p.2)
- good practice identified by HMIe inspecting in Scottish schools: partnerships with parents; involvement of partner agencies; cultures of respect and celebrations of internationally and culturally diverse community/understanding of global citizenship (HMIe 2009, p.3).
- features of good practice in Scottish schools: addressing children's language needs whilst not withdrawing them from mainstream education; monitoring their progress, achievements and attainments; encouraging and supporting parental involvement; buddy systems to help children settle in (HMIe 2009, p.13).

The New Scots Strategy (Scottish Government 2013b) is an attempt to coordinate the efforts of all organisations involved in supporting refugees and people seeking asylum in Scotland. One of the strategic outcomes is that refugees and asylum seekers are able to achieve the English language skills they need to successfully integrate with Scotland's communities.

Additionally, the refreshed ESOL Strategy[36] links a range of related policies and examples of different types of provision with a focus on professional and workforce development and on equality and diversity.

Education Scotland has also produced an overview of the school system for parents and families arriving in Scotland[37]. It explains the age range for most learners and the support services offered within schools as well as curriculum details and the importance of health and wellbeing. It also includes other sources of information available locally or online.

5.3.6 Addressing the gender gap among adolescents

While efforts continue, in Scotland as elsewhere, to encourage children and adolescents, and particularly girls, to develop an enduring interest in science, technology, engineering and mathematics (STEM subjects), the persisting gender gap in literacy development, which successive national and international surveys continue to report (see Section 4), has become a priority focus for attention in policy circles and elsewhere.

The National Literacy Trust in particular has run several initiatives throughout the UK, including in Scotland, to motivate boys and men to engage with reading. Projects such as Premier League Reading Stars[38] , 'designed for children aged 9-13 who love football but lack motivation to engage with and achieve in literacy', and Sports Stories, use the motivational power of sport to promote literacy and hold great appeal for a male audience in particular. Thousands of children over recent years have participated in Premier League Reading Stars, and formal impact evaluations have repeatedly found that while reading interest, attitudes and attainment have improved for all participants, this is especially so for younger children, for children from deprived backgrounds, and for boys (e.g. Pabion & Clark, 2015).

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[36]http://www.educationscotland.gov.uk/communitylearninganddevelopment/about/policy/esolstrategy.asp.
[37] www.educationscotland.gov.uk/Images/SchoolsGuideforRefugeesinScotland_tcm4-853779.pdf.
[38] http://www.literacytrust.org.uk/premier_league_reading_stars/about_plrs.

Recognising the increasing use of digital devices among young people for social interaction and for learning, the National Literacy Trust has also been exploring the potential of technologies for improving literacy. A recent research study investigated the impact of access to an ebooks platform on students' reading motivation and skills (Picton & Clark, 2015). Primary and secondary schools from across the UK provided attitudinal and attainment data before and after running an ebooks project with groups of learners, and a subset of practitioners and learners took part in interviews and focus groups to explore initial findings in more depth. The impact on participants was positive in several important respects. For example, confidence in reading grew among learners who claimed to find reading difficult at the start of the project. Interest in reading also increased, as did reading enjoyment and reading frequency, partly in response to the greater variety of reading matter available, offering something of interest for everyone. And reading attainment improved. All of these benefits were greater for boys than for girls.

In Scotland, the Curriculum for Excellence aims to drive up literacy standards for all learners and to ensure that everyone has the opportunity to develop their reading skills to an advanced level (Scottish Government 2015c). On the evidence of the National Literacy Trust research, the current initiative to provide every teacher and learner in Scotland with a digital learning device (Section 5.1.3) should further support attempts to reduce, if not eliminate, the currently persisting gender and deprivation gaps in literacy.

5.3.7 Preventing early school leaving

The 2020 EU target value for the early school leaving (ESL) rate is 10%. As a result of various initiatives to avoid and address the problem, the rate of early school leavers in Scotland was under 9% in 2014, down from 11% in 2013, almost 13% in 2012 and 14% in 2011 (Scottish Government 2015d).

Following a pilot in ten local authority areas, the Government decided on the implementation of Activity Agreements across Scotland as from March 2011. An Activity Agreement is a signed agreement between a young person and an adviser, to the effect that the young person will take part in a programme of learning and activity which helps them to become ready for formal learning or employment. Activity Agreements provide 'stepping stone' provision, in a community or third sector setting for those young people who are not ready or able to access formal learning post-16, and those at greatest risk of disengagement (European Commission 2013, p.31).

Other recent policy developments in Scotland established strategies to increase the participation of young people not in education, employment or training (NEET). 'Opportunities for All' (Scottish Government 2012b) forms part of this national strategy and is a commitment to offer all those NEET aged between 16 and 19 a place in learning or training (European Commission 2013, p.47).

'Exceptional entry' involves partnership working between schools and colleges. It allows students to enter college in the term before their statutory school leaving date and to attend college while still on the school role. However, while Canduela et al. (2010) found that the majority of potential early leavers complete their programme, the most disadvantaged appear to remain least likely to progress.

5.3.8 Increasing participation, inclusion and equity for children and adolescents: Programmes, initiatives and examples

Tackling inequality is at the heart of Scottish Government's agenda in order to ensure that every child can gain skills for life and experience success. Current strategies involve a move away from the deficit model which sees the learner as the problem and pays inadequate attention to other factors which may have an influence on learning.

Curriculum for Excellence is intended to be an inclusive curriculum for all learners aged 3-18, wherever learning is taking place. The range of measures is intended to address inequalities relating to race, gender, disability, religion or belief and sexual orientation. The Additional Support for Learning legislation in Scotland (Scottish Executive 2004b) also promotes inclusion: it states that learners have a right to additional support when they need it and for whatever reason.

Since August 2014, the funded entitlement to 600 hours of early learning and childcare for all 3 and 4 year olds has been extended to 2 year olds who are 'looked after' (under a kinship order or with a parent appointed carer) or who have a parent in receipt of certain qualifying state benefits.

The Scottish Attainment Challenge is the most recent initiative funded by central government (£100 million over four years, 2015-19) to provide targeted support for learners in schools and local authorities with the highest concentration of children living in deprivation. This will focus on literacy, numeracy, and health and wellbeing.

A range of resources have been produced and made available nationally to help achieve inclusion and equalities among children in Scotland. Those listed provide a flavour of what is available:

- Promoting diversity and equality: developing responsible citizens for the 21st century (Education Scotland 2013) – picking up on one of the four overarching purposes of CfE (responsible citizens) the report is intended to support schools and centres in promoting diversity and equality through all aspects of planned learning;
- Glow Inclusion Hub: a professional learning forum on the national portal to support practitioners to discuss, explore and share practice relating to inclusion;
- Books for all Scotland (CALL Scotland) – a project funded by Scottish Government from 2010, to encourage and support local authorities to make materials available for learners with a print disability;
- Route Map through CLPL for those making provision for children with complex additional support needs in schools in Scotland – published online in 2015 by Education Scotland[39], it refers to the revised professional standard for career long professional learning;
- Route Map through CLPL for Dyslexia[40] – also published online in 2015, this resource also refers to the revised professional standard for career long professional learning and supports professional learning about, and understanding of, dyslexia and inclusive practice;
- Supporting learners: the education of learners newly arrived in Scotland[41] – an Education Scotland review which collates reports and resources to assist staff to consider positive interventions to deliver inclusive education;

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[39] www.educationscotland.gov.uk/Images/RouteMapCLPLComplexASN_tcm4-871731.pdf.
[40] www.educationscotland.gov.uk/Images/RMCLPLDyslexiaFinal_tcm4-872316.pdf.
[41] http://www.educationscotland.gov.uk/Images/SupportingLearnersFinalDraft_tcm4-872828.pdf.

- Learning Journey – a celebration of gypsy/traveller communities in Scotland[42] – an online resource exploring the history and culture of the gypsy traveller community in Scotland through the expressive arts and literacy curriculum;
- Journey to Excellence[43] an introduction to inclusion: achieving success for all learners – a resource to support establishment self-evaluation of inclusive practice.

[42] http://www.educationscotland.gov.uk/resources/l/genericresource_tcm4874471.asp.
[43] http://www.educationscotland.gov.uk/Images/SupportingLearnersFinalDraft_tcm4-872828.pdf.

6 References

Adamson, P. (2012). *Measuring child poverty. New league tables of child poverty in the world's rich countries*. Innocenti Report Card 10. Florence: UNICEF Innocenti Research Centre.

Blake Stephenson (2015). Assertive Outreach - Bookbug for the Home. Year 2 Evaluation - Final Report. Edinburgh: Scottish Book Trust.

Candappa, M., Ahmad, M., Balata, B., Dekhinet, R., and Gogmen D. (2007). *Education and schooling for asylum seeking and refugee students in Scotland: an exploratory study*. Edinburgh: Scottish Government Education Information and Analytical services.

Canduela, J., Chandler, R., Elliott, I., Lindsay, C., Macpherson, S. McQuaid, R. W. (2010). 'Partnerships to Support Early School Leavers: School-College Transitions and" Winter Leavers" in Scotland', *Journal of Education and Work*, Vol. 23, No. 4.

Christie, J. Robertson, B. & Stodter, J. (2014). *Review of the Scottish Government Literacy Hub Approach*. Edinburgh: Scottish Government and Association of Directors of Education in Scotland.

Donaldson, G. (2011). *Teaching Scotland's Future*. Edinburgh: Scottish Government.

Education Scotland (2012a). *Quality and Improvement in Scottish Education. Trends in inspection findings 2008-2011*. Glasgow: Education Scotland.

Education Scotland (2012b). CfE briefing 2. Curriculum for excellence: assessing progress and achievement in the 3-15 broad general education. Glasgow: Education Scotland.

Education Scotland (2013). *Promoting diversity and equality: developing responsible citizens for the 21st century*. www.educationscotland.gov.uk/Images/Promoting_DE080313_tcm4-747988.pdf

Education Scotland (2014a). *Making sense: education for children and young people with dyslexia in Scotland*. www.educationscotland.gov.uk/Images/MakingSenseDyslexiaReport_tcm4-829765.pdf

Education Scotland (2014b). *English for speakers of other languages in Scotland's colleges*. Livingston: Education Scotland.

Education Scotland (2015a). *3-18 Literacy and English Review*. Edinburgh: Education Scotland.

Education Scotland (2015b). Supporting learners: the education of learners newly arrived in Scotland. Review of resources, advice and guidance from Education Scotland. www.educationscotland. gov.uk/Images/SupportingLearnersFinalDraft_tcm4-872828.pdf.

European Commission (2013). Reducing early school leaving: key messages and policy support. Final report of the thematic working group on early school leaving. http://ec.europa.eu/education/policy/strategic-framework/doc/esl-group-report_en.pdf.

European Commission/EACEA/Eurydice (2011). *Teaching Reading in Europe: Contexts, Policies and Practices*. Brussels: Education, Audiovisual and Culture Executive Agency.

European Commission/EACEA/Eurydice/Eurostat (2014). *Key Data on Early Childhood Education and Care in Europe*: 2014 Edition. Eurydice and Eurostat Report. Luxembourg: Publications Office of the European Union.

GTCS (2012a). *The Standards for Registration: mandatory requirements for Registration with the General Teaching Council for Scotland*. Edinburgh: The General Teaching Council for Scotland.

GTCS (2012b). *The Standard for Career-Long Professional Learning: supporting the development of teacher professional learning*. Edinburgh: The General Teaching Council for Scotland.

GTCS (2012c). *The Standards for Leadership and Management: supporting leadership and management development*. Edinburgh: The General Teaching Council for Scotland.

GTCS (2013). *Guidelines for Initial Teacher Education Programmes in Scotland*. Edinburgh: The General Teaching Council for Scotland.

GTCS (2015). *Memorandum on Entry Requirements to Programmes of Initial Teacher Education in Scotland*. Edinburgh: The General Teaching Council for Scotland.

Hamilton, T. (2014). The role of a professional regulatory body in achieving the priorities of teacher education. *TEAN Journal*, 6: 49-56.

HLG (2012). EU High Level Group of Experts on Literacy. Final Report, September 2012. Luxembourg: Publications Office of the European Union.

HMIE (2009). Count us in: a sense of belonging: meeting the needs of young people newly arrived in Scotland. Livingston: HMIE.

ICF Consulting Services (2015). *Literature Review on the Impact of Digital Technology on Learning and Teaching*. Edinburgh: Scottish Government.

Johnson, S. (2016). National Assessment and Intelligent Accountability. In Wyse, D., Hayward, L. & Pandya, J. (eds), *The SAGE Handbook of Curriculum, Pedagogy and Assessment,* Chapter 53. London: Sage Publications.

Johnson, S. & Munro, L. (2009). Relationships among pupil self-assessments, teacher judgements and test results. Paper presented at the *10th Conference of the Association for Educational Assessment – Europe*, November, Malta.

Lankes, E.M. & Carstensen, C.H. (2007). Der Leseunterricht aus der Sicht der Lehrkräfte. In W. Bos, S. Hornberg, K.-H. Arnold, G. Faust, L. Fried, E.M. Lankes, K. Schwippert & R. Valtin (eds). IGLU 2006 *Lesekompetenzen von Grundschulkindern in Deutschland im internationalen Vergleich*, pp.161–193. Munich: Waxmann.

LTS (2009). *Curriculum for Excellence*. Glasgow: Learning and Teaching Scotland.

Mullis, I.V.S., Martin, M.O., Kennedy, A.M. & Foy, P. (2007). *PIRLS 2006 International Report*. Boston College, TIMSS and PIRLS International Study Centre.

Munro, L. (2003). National testing and national assessments. In T. G. K. Bryce & W. M. Humes (eds), *Scottish education: Post-devolution*. Edinburgh: Edinburgh University Press.

Naumann, I., McLean, C., Koslowski, A., Tisdall, K. & Lloyd, E. (2013). *Early Childhood Education and Care Provision: International Review of Policy, Delivery and Funding*. Final report. E-book. Scottish Government Social Research.

NHS (2014). Child health 27-30 month review statistics: financial year 2013/14. NHS Information Services Division.

OECD (2010a). PISA 2009 Results: What Students Know and Can Do – Student Performance in Reading, Mathematics and Science (Volume I). Paris: OECD Publishing.

OECD (2010b). PISA 2009 Results: Overcoming Social Background – Equity in Learning opportunities and Outcomes (Volume II). Paris: OECD Publishing.

OECD (2012). Quality Matters in Early Childhood Education and Care: United Kingdom (England) 2012. Paris: OECD Publishing.

OECD (2014a). *Education at a Glance 2014*. Paris: OECD Publishing.

OECD (2014b). PISA 2012 Results: What Students Know and Can Do – Student Performance in Mathematics, Reading and Science (Volume I, Revised edition, February 2014). Paris: OECD Publishing.

OECD (2015). Improving Schools in Scotland: An OECD Perspective. Paris: OECD Publishing.

Pabion, C. & Clark, C. (2015). *Premier League Reading Stars 2014/15. Evaluation Report.* London: National Literacy Trust.

Picton, I. & Clark, C. (2015). *The Impact of Ebooks on the Reading Motivation and Reading Skills of Children and Young People: A study of schools using RM Books*. London: National Literacy Trust.

Scottish Executive (2003). *Educating for Excellence choice and opportunity. The Executive's response to the national debate.* Edinburgh: Scottish Executive Education Department.

Scottish Executive (2004a). *A curriculum for excellence. The Curriculum Review Group*. Edinburgh: Scottish Executive Education Department.

Scottish Executive (2004b). *Education (Additional Support for Learning) (Scotland) Act 2004*: Edinburgh: The Scottish Executive.

Scottish Executive (2006a). *Scottish Survey of Achievement*. 2005 English language and core skills – practitioner's report. Edinburgh: The Scottish Executive.

Scottish Executive (2006b*). A curriculum for excellence*. Building the Curriculum 1: the contribution of the curriculum areas. Edinburgh: Scottish Executive Education Department.

Scottish Executive (2006c). *More choices more chances: a strategy to reduce the proportion of young people not in education, employment or training in Scotland*. Edinburgh: Scottish Executive Education Department.

Scottish Executive (2007). *Scottish Survey of Achievement*. 2006 social subjects (enquiry skills) and core skills – supporting evidence. Edinburgh: The Scottish Executive.

Scottish Government (2007). *Progress in International Reading Literacy Study (PIRLS) 2006. Highlights from Scotland's results*. Edinburgh: The Scottish Government, Education Information and Analytical Services.

Scottish Government (2008a). *Scottish Survey of Achievement*.2007 science, science literacy and core skills. Edinburgh: The Scottish Government.

Scottish Government (2008b). *The Early Years Framework*. Edinburgh: Scottish Government.

Scottish Government (2008c). *Curriculum for Excellence*. Building the curriculum 3: a framework for learning and teaching. Edinburgh: The Scottish Government.

Scottish Government (2008d). *Getting it right for every child*. Edinburgh: The Scottish Government.

Scottish Government (2010a). *2009 Scottish Survey of Achievement. Reading and Writing*. Edinburgh: The Scottish Government.

Scottish Government (2010b). *Literacy action plan*: *an action plan to improve literacy in Scotland*. www.gov.scot/Resource/Doc/328493/0106197.pdf

Scottish Government (2010c). *Curriculum for Excellence*. Building the curriculum 5: a framework for assessment. Edinburgh: The Scottish Government.

Scottish Government (2011) *Child poverty strategy for Scotland*. Edinburgh: The Scottish Government.

Scottish Government (2012a). *Scottish Index of Multiple Deprivation 2012*. Edinburgh: The Scottish Government.

Scottish Government (2012b). Opportunities for all: supporting all young people to participate in post-16 learning, training or work. Edinburgh: Scottish Government.

Scottish Government (2013a). Scottish Survey of Literacy and Numeracy (SSLN) 2012 (Literacy). Edinburgh: The Scottish Government.

Scottish Government (2013b). *New Scots: integrating refugees in Scotland's communities*. E-book: The Scottish Government.

Scottish Government (2014). *Building the ambition*. National practice guidance on early learning and childcare. Children and Young People (Scotland) Act 2014. Edinburgh: The Scottish Government.

Scottish Government (2015a). *Summary statistics for schools in Scotland*. No. 6: 2015 Edition, 9 December.

Scottish Government (2015b). *Scottish Survey of Literacy and Numeracy* (SSLN) 2014 (Literacy). Edinburgh: The Scottish Government.

Scottish Government (2015c). The Final Report from the Standing Literacy Commission on the Scottish Government's Literacy Action Plan. Edinburgh: The Scottish Government.

Scottish Government (2015d). *Europe 2020: Scottish national reform programme 2015*. Edinburgh: The Scottish Government.

Scottish Government and Education Scotland (2015). *Consultation on the Development of a Digital Learning and Teaching Strategy for Scotland*. Edinburgh: Scottish Government and Education Scotland.

SCQF (2012). *SCQF Level Descriptors*. Glasgow: Scottish Credit and Qualifications Framework.

Siraj, I. & Kingston, D. (2015). *An independent Review of the Scottish Early Learning and Childcare (ELC) workforce and Out of School Care (OSC) workforce*. Edinburgh: Scottish Government.

Sosu, E. & Ellis, S. (2014). *Closing the Attainment Gap in Scottish Education*. York: Joseph Rowntree Foundation.

Spencer, E. (2013). National assessments: Improving learning and teaching through national monitoring? In T. G. K. Bryce, W.M. Humes, D. Gillies & A. Kennedy (eds), *Education in Scotland*. Edinburgh: Edinburgh University Press.

Zeitlin, J., Mohangoo, A. & Delnord, M. (eds) (2010). *European perinatal health report. Health and care of pregnant women and babies in Europe in 2010.* www.europeristat.com/images/doc/EPHR2010_w_disclaimer.pdf.