The evaluation of the School Support Programme under DEIS: Changes in pupil achievement in urban primary schools between 2007 and 2013

Bulletin Report

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Introduction

The DEIS programme has been in place now in primary and post-primary schools for seven years. The programme, which was introduced by the Department of Education and Science (DES) in 2006/2007, is aimed at addressing the educational needs of children and young people from disadvantaged communities. In its most intensive form (i.e., in The School Support Programme or SSP) – programme participants are entitled to a range of supports including access to additional funding, and to literacy and numeracy and other programmes such as Home/School/Community Liaison service and the School Completion Programme. A major feature of the SSP at both primary and post-primary levels is the requirement on schools to develop plans in specified areas (e.g., literacy and numeracy) and schools are provided with guidance in doing so. Some supports (e.g., reduced class sizes) are restricted to schools in Band 1 (about 200 schools) because they have been assessed as having greater concentrations of disadvantage than schools in Band 2[1].

The evaluation of DEIS

The Educational Research Centre (ERC) was commissioned by the DES to conduct an independent evaluation of the SSP at both primary and post-primary levels. The evaluation began in early 2007, and has been attempting to monitor the implementation of the programme and assess its impact on students, families, schools, and communities at primary and post-primary levels. A wide variety of data have been collected from schools since the evaluation began. Important areas, such as the extent to which schools have engaged with planning for DEIS, and how well various elements of the programme are being implemented in schools and in the system as a whole, have been investigated using questionnaires and interviews with school staff. Many primary and post-primary schools (including all of the 195 post-primary schools in DEIS) have been visited by the evaluators and their representatives, and further work of this kind in schools is planned.

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[1] For more information on the DEIS programme, see *www.education.ie.*

An important feature of the evaluation at both primary and post-primary levels is the monitoring of changes in achievement and other pupil outcomes. A report on outcomes at post-primary level is currently at an advanced stage, while the purpose of the current report is to describe outcomes in urban schools at primary level since baseline data were collected in 2007[2].

Achievement data collected since 2006/2007 at primary level

DEIS was introduced in September 2006 and the first round of testing in reading and mathematics took place at the end of that school year in spring of 2007. The test data that were collected in 2007 represented baseline data with which later test scores in reading and mathematics could be compared. The most recent round of testing was carried out in May of 2013, involving students in 2nd, 3rd, 5th and 6th class. Ultimately, the testing is necessary to examine any impact of the DEIS programme on pupils' achievements.

Figure 1 illustrates when pupils in different grade levels were tested over the period 2007 to 2013. Each cell highlighted in black indicates that the pupils in that cohort participated in testing. As the figure shows, 2nd, 3rd & 6th classes (E, D, & A) were tested in 2007 (top row), while H, G, E & D were tested in 2010. In 2013, 2nd, 3rd, 5th & 6th classes (K, J, H & G) were tested (bottom row). The four diagonal arrows in the figure represent the longitudinal relationships between the cohorts from 2007 and 2013 (e.g., pupils tested in 2nd class in 2007 were tested again when in 5th class in 2010[3]). The four vertical downward arrows indicate the potential for cross-sectional comparisons (e.g., 2nd class achievement in 2007 can be compared with 2nd class achievement in 2010 and 2013).

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[2] Test data were also collected in participating rural schools, and a report on baseline achievement data in rural schools is available (Weir, Archer, & Millar, 2009). A report on achievement and the nature of disadvantage in rural schools was completed recently (Weir & McAvinue, 2013). All evaluation reports are available at *www.erc.ie*

[3] Note that 5th class was added to the testing programme in 2010 and 2013 to provide a second longitudinal cohort (see the next section for more detail on this).

Figure 1. Reading and mathematics data collection points in the evaluation of the SSP under DEIS in urban primary schools.

	Junior Infants	Senior Infants	1st class	2nd class	3rd class	4th class	5th class	6th class
2007	H	G	F	E	D	C	B	A
2008	I	H	G	F	E	D	C	B
2009	J	I	H	G	F	E	D	C
2010	K	J	I	H	G	F	E	D
2011	L	K	J	I	H	G	F	E
2012	M	L	K	J	I	H	G	F
2013	N	M	L	K	J	I	H	G

Reports on the first phase of the evaluation were completed in 2011 (Weir & Archer, 2011; Weir, 2011). As well as summarising the outcomes from the testing in 2007 and 2010, these reports also contained some initial findings on the implementation of the programme, both at system and local level. A report examining the impact of DEIS on class size in participating urban schools is also available (see Weir & McAvinue, 2012). The current report describes the outcome of the third round of testing in 2013, but includes data from the previous occasions for comparison purposes.

The sample of schools and pupils

Several factors were considered in deciding on the sample of schools and pupils. A total sample of 120 schools was needed to represent different types of schools (e.g., large, medium, small) in the SSP, and 71 of those selected were in Band 1 while 49 were in Band 2. An important consideration in the sampling of pupils related to the longitudinal aspect of

the study. Selecting all pupils at a grade level improves the chance of recapturing those pupils in subsequent cycles of testing. Therefore, it was decided to test all eligible pupils at the class levels of interest to allow for some attrition (due, for example, to pupils moving school or changing classes). While three grade levels were tested at baseline in 2007, four grade levels were tested in the second and third rounds of testing in 2010 and 2013 respectively. One longitudinal cohort existed from the outset in which 3rd class pupils tested in 2007 would represent the majority of pupils to be retested in 6th class in 2010. However, in 2010 and 2013 the study was extended to include 5th class pupils to allow for a second longitudinal cohort (2nd to 5th). More detailed information on the sample, and on the instruments used to assess reading and mathematics, are available in the 2011 report by Weir and Archer (see *www.erc.ie*).

In our sample of 120[4] schools, 71 schools were in Band 1 and 49 were in Band 2. On all three testing occasions, each of the 120 schools agreed to participate in the testing, yielding a 100% response rate. Very large numbers of pupils participated in each administration, and the inclusion of 5th class from 2010 increased the numbers to over 17,000 pupils in total in 2010 and 2013. Numbers in 2nd class are smaller than in other classes reflecting the inclusion of greater numbers of senior than junior classes in the sample.

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[4] In 2007, there were 120 schools in the sample. Two schools amalgamated between 2007 and 2010, and so there were only 119 schools represented in the data in 2010 and 2013.

Table 1. Numbers of pupils[5] at each grade level involved in testing in three test administrations (*N*=120 schools).

Grade level	2007	2010	2013
2nd class	3,599	3,717	3,356
3rd class	4,544	4,657	4,636
5th class	—	4,628	4,683
6th class	4,434	4,597	4,511
All	12,577	17,599	17,186

Numbers of absent and exempted pupils

Schools were advised to avoid testing on Mondays, Fridays or other days in which pupil absences might be expected to be higher than normal. A member of the evaluation team, or a specially appointed representative, brought all test materials to the schools on the day, oversaw the administration of tests by teachers, and collected up materials for return to the ERC. Results were sent to individual class teachers in the September following each test administration. Table 2 shows the percentage of pupils absent for the tests in each year. Levels of pupil absence have fallen from 10.8% in 2007 to 7.1% in 2013. There is a tendency for levels of absence to rise with increasing grade level (this trend is most marked in 2010), but is less clear-cut in the most recent round of testing.

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[5] These numbers refer to pupils with reading test scores, but the numbers for mathematics are very similar.

Table 2. Percentages of pupils absent for testing at each grade level in 2007, 2010 and 2013.

Grade level	2007	2010	2013
2nd class	10.1%	6.7%	6.8%
3rd class	10.6%	7.3%	6.9%
5th class	—	8.1%	7.7%
6th class	11.6%	10.0%	7.2%
All	10.8%	8.0%	7.1%

There is a further group of pupils that are not represented in the data. These are pupils whose teachers have chosen to exempt them from testing. Pupils could be exempted if they 1) were diagnosed with a moderate to severe general learning disability, 2) had a physical disability that would prevent them from participating, or 3) were from a migrant family and their proficiency in English was at such a level that in the opinion of the teacher(s) they were unable to attempt the test. Table 3 shows that exemption levels are very low, and have almost halved overall since baseline data were collected in 2007. As the table shows, there does not seem to be any discernible pattern of exemptions that relates to grade level.

Table 3. Percentages of pupils exempted from testing[6] by their teachers at each grade level in 2007, 2010 and 2013.

Grade level	2007	2010	2013
2nd class	2.3%	1.8%	0.8%
3rd class	1.7%	1.4%	0.8%
5th class	—	1.9%	1.1%
6th class	1.2%	1.1%	0.9%
All	1.7%	1.5%	0.9%

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[6] Exemption levels are available separately for reading and mathematics, but there are only very small differences in exemption rates by subject.

Achievement in reading

Reading achievement was assessed using Form A of the Drumcondra Sentence Reading Test (DSRT). The DSRT is a multiple-choice group test with 6 levels, one for each of 1st to 6th class (Table 4). At each level of the test, pupils read a sentence and try to identify a target word. The test is secure (it is reserved for research purposes) and is not available publicly. For more information on the DSRT, see Weir and Archer (2011).

Table 4. Example item from the Drumcondra Sentence Reading Test and number of items at each test level.

| Example item from the DSRT: |
| A. Cats like to drink _____. |
| tea   toys   milk   butter |

Grade level	DSRT Level	Number of items
2nd class	2	40
3rd class	3	40
5th class	5	40
6th class	6	40

Cross-sectional comparisons of reading achievement

The descriptions of pupil achievement data that follow are cross-sectional, and involve simple comparisons of the overall average reading score in 2007 with the follow-up overall average reading scores in 2010 and 2013 for each grade level. These comparisons revealed overall improvements in reading achievement at all grade levels (Table 5). The average raw score (number of items answered correctly) achieved by pupils in 2nd, 3rd, and 6th class in SSP schools in 2010 was significantly higher than the corresponding score three years earlier in 2007. Results of the most recent cycle of testing in spring of 2013 revealed that the previous gains had not

only been maintained, but had been built on. The data also show that improvements in reading were greatest at lower grade levels, with the largest gains being noted among pupils in 2nd class and the smallest at 6th class (Table 5). In 2010, 2nd class pupils achieved an average of 24.3 out of 40 reading items correct, an increase on the 2007 average of 22.8. By 2013, the average number of items correct had increased further to 26 items. While this represents a significant increase, it should be noted that it is still below that of the norm group average[7] for 2nd class of 29 items correct.

Table 5. Average reading raw scores (number of items correct out of a total of 40 items) at each grade level in 2007, 2010 and 2013.

Grade level	2007	2010	2013	Norm group average
2nd class	22.8	24.3	26.0	29.0
3rd class	22.1	22.7	24.8	29.0
5th class	—	19.4	20.9	23.5
6th class	18.0	18.4	18.6	24.0

Low- and high-scorers in reading

The percentage of very low achieving pupils also decreased significantly between 2007 and 2013. At second class level, the percentage of pupils scoring at or below the 10th percentile[8] in reading decreased by almost 6% between 2007 and 2010, and decreased by a further 4.9% between 2010 and 2013. Indeed, the percentage of 2nd class pupils in SSP schools halved over the 6-year period, reducing the percentage of low-scorers to almost that of the national average of 10%. While the reduction in the percentage of low-scorers was found to be most marked at 2nd class level, it reduced at other grade levels also. The percentage of pupils scoring at or below the 10th percentile in reading

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[7] The norm group is the national sample of pupils on whom the test was standardised.

[8] Percentile ranks allow pupils' test scores to be compared with those of pupils in the norm group. If a pupil achieves a score at the 10th percentile it means that his or her score is greater than or equal to 10% of others taking that test.

reduced in 3rd and 6th class by 9.6% and 7.8% respectively between 2007 and 2013. The discrepancy between pupils in the SSP and those in the norm group is greatest at 6th class level, with twice the percentage of low-scoring pupils in SSP schools than in the norm group.

Table 6. Percentages of pupils scoring at or below the 10th percentile in reading at each grade level in 2007, 2010 and 2013.

Grade level	2007	2010	2013	Norm group average
2nd class	22.0%	15.9%	11.0%	10.0%
3rd class	26.4%	23.0%	16.8%	10.0%
5th class	—	20.6%	13.6%	10.0%
6th class	28.0%	25.6%	20.2%	10.0%

The percentage of high-scoring pupils in the SSP – those scoring at or above the 90th percentile - is lower than the national average of 10% (less than 5% at all grade levels) (Table 7). It is worth noting, however, that the decrease in low-scoring pupils was not accompanied by a reduction in the percentage of high-scorers (those at or above the 90th percentile). In both 2007 and 2010, 2.2% of 2nd class pupils achieved reading test scores at this level, and the percentage increased to 4.1% in 2013. If anything, there appears to be a slight increase in the percentage of very high-scoring pupils over the three cycles of testing.

Table 7. Percentages of pupils scoring at or above the 90th percentile in reading at each grade level in 2007, 2010 and 2013.

Grade level	2007	2010	2013	Norm group average
2nd class	2.2%	2.2%	4.1%	10.0%
3rd class	1.6%	1.1%	1.6%	10.0%
5th class	—	3.3%	4.8%	10.0%
6th class	2.3%	2.5%	3.1%	10.0%

A comparison of reading achievement in 2007, 2010 and 2013

Reading achievement has been described so far in terms of raw scores (average numbers of correctly answered items) and percentile ranks (the percentage in the cohort scoring at a particular level compared to pupils nationally). To facilitate comparing the achievements of pupils at different grade levels, the average standard scores achieved by pupils on the three occasions for which test scores exist were plotted (Figure 2). Using standard scores has the advantage that all pupils are placed on a common scale and the relative achievements of pupils at different grade levels can be easily assessed and compared with the norm group. The broken black line in Figure 2 represents a standard score of 100, and is, by definition, the national average on all levels of the DSRT. The other lines in Figure 2 show an upward change in reading achievement of pupils in all grade levels in the SSP both between 2007 and 2010 and between 2010 and 2013. It can also be seen that the reading achievements of pupils in 2nd class were higher at baseline than those of other class levels. Furthermore, the discrepancy between the performance of 2nd class pupils in our sample and those in the norm group narrowed the most at this grade level. Pupils in 6th class had the lowest starting scores, and least improvement overall, but the steeper gradient of the line between 2010 and 2013 indicates that they improved more in the recent test administration than they did between 2007 and 2010. The same was true for pupils in 3rd class, where the improvement was even more impressive between 2010 and 2013 than between 2007 and 2010.

Figure 2. Reading standard scores of 2nd, 3rd, 5th and 6th class pupils in 2007, 2010, and 2013.
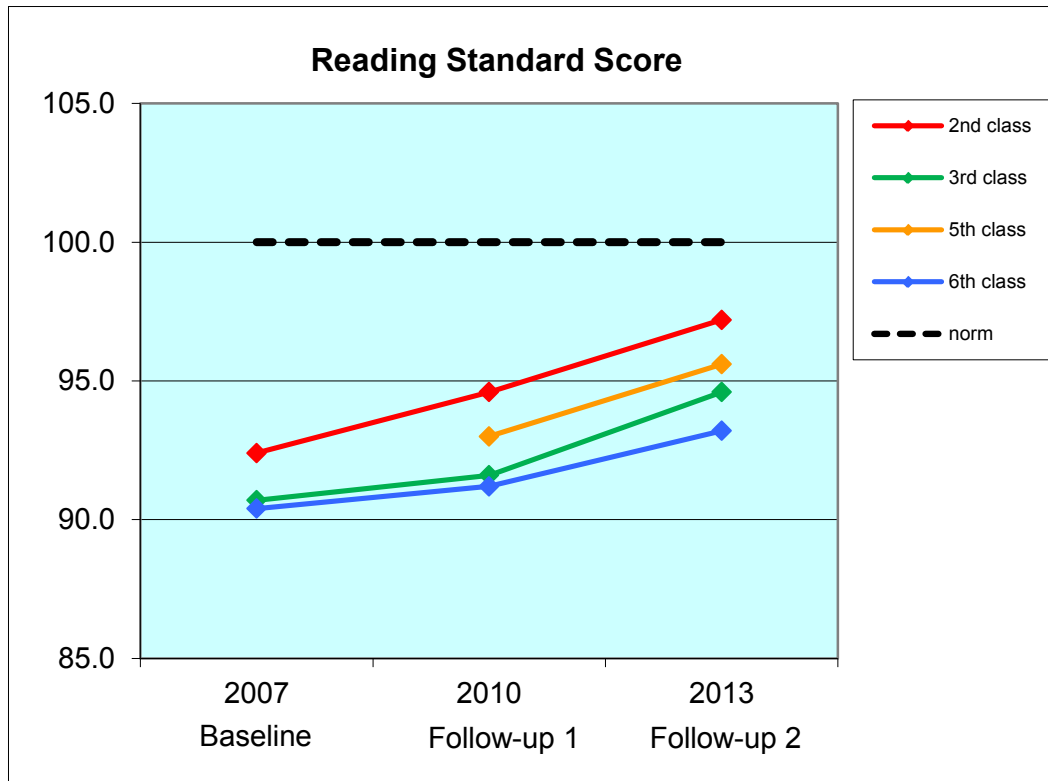
Reading achievement according to DEIS Band

In recognition of the fact that some schools in the SSP have a more disadvantaged profile than others, the average reading achievements of pupils in the 70 Band 1 and the 49 Band 2 schools in our sample were calculated separately and are shown in Table 8. In all comparisons at all grade levels the average raw scores of pupils in Band 1 are lower than those of pupils in Band 2. The same is true of low-scoring pupils, with much greater percentages of such pupils being found in Band 1 than in Band 2 schools.

Table 8. Average reading raw score, and percentages (in brackets) of pupils in Band 1 and Band 2 scoring at or below the 10th percentile at each grade level in 2007, 2010 and 2013.

Grade level	2007		2010		2013		Norm group average
	Band 1	Band 2	Band 1	Band 2	Band 1	Band 2	
2nd class	21.6 (26.0%)	24.3 (17.0%)	23.3 (18.6%)	25.5 (12.9%)	25.3 (13.2%)	26.9 (8.5%)	29.0 (10.0%)
3rd class	20.5 (31.6%)	23.9 (20.6%)	21.6 (26.6%)	24.0 (18.9%)	23.6 (19.5%)	26.2 (13.6%)	29.0 (10.0%)
5th class	—	—	18.1 (25.5%)	21.0 (14.5%)	19.6 (17.1%)	22.4 (9.4%)	23.5 (10.0%)
6th class	16.2 (36.0%)	19.9 (19.1%)	16.9 (31.1%)	20.1 (19.4%)	18.4 (25.3%)	21.0 (14.4%)	24.0 (10.0%)

Longitudinal comparisons of reading achievement

As well as comparing the average test scores of groups of pupils at the same grade levels over time, the evaluation also had a longitudinal element (in that some pupils were tested more than once). Many pupils who were in 2nd and 3rd class in 2010 were in 5th and 6th class in 2013. It was possible to identify these subgroups of pupils and investigate how they performed on the second occasion relative to their earlier performance. The samples are smaller than either of the complete samples in 2010 or 2013. This is because they do not include, for example, pupils who were absent on either of the days on which the tests were administered, were exempted on either occasion, or had left the school. The longitudinal comparisons involve the use of standard scores, as the average raw score varies depending on the level of the test. The standard score, in contrast, always has a norm group average of 100 regardless of the test level, and so it provides a common metric for comparing the performance of the same group of pupils on different levels of the test.

Table 9 shows the standard scores in reading of both cohorts in 2010 and 2013.

Table 9. Reading standard scores of 2nd class pupils in 2010 and their follow-up scores in 5th class in 2013, and reading standard scores of 3rd class pupils in 2010 and their follow-up scores in 6th class in 2013.

Cohort	Reading		Norm group average
	2010	2013	
2nd — 5th (*N*=2,586)	95.4	96.7	100
3rd — 6th (*N*=3,492)	92.3	93.8	100

As the table shows, reading scores increased in both groups from one occasion to the next, and although it is a small increase in absolute terms, the difference is statistically significant. This is similar to the findings concerning the earlier longitudinal cohorts (i.e., those tested in 2007 and 2010), which revealed small but significant increases in reading achievement in both cohorts (see Weir & Archer, 2011).

Achievement in mathematics

Mathematics achievement was assessed using a shortened version of the Drumcondra Primary Mathematics Test - Revised (DPMT-R). The test is composed of a mixture of multiple-choice and open-response items from across mathematics curriculum areas (see Weir & Archer, 2011 for more detail). The test is administered to pupils in groups, and there are six levels, one for each of 1st to 6th class (Table 10). While the test is unfamiliar to pupils in its shortened form, pupils and teachers will have some familiarity with the long version as it is used in many primary schools to assess mathematics achievement.

Table 10. Example item from the shortened version of the Drumcondra Primary Mathematics Test – Revised, and number of items at each grade level.

Example item from the shortened version of the DPMT-R:
Which of these numbers is the largest?
O   8
O   6
O   10
O   9

Grade level	Shortened DPMT-R Level	Number of items
2nd class	2	30
3rd class	3	25
5th class	5	25
6th class	6	25

Cross-sectional comparisons of mathematics achievement

The mathematics achievements of pupils at each grade level in 2007, 2010 and 2013, as expressed in average raw scores, are presented in Table 11. At each grade level, mathematics achievement improved between 2007 and 2010, and again between 2010 and 2013. The average score of pupils in the more junior classes in particular (2nd and 3rd) grew much closer to that of the norm group over the 6-year period. For example, in 2013, 3rd class pupils achieved an average of 14 out of 25 items correct compared with the average of 15.5 correct items achieved by the norm group. The largest difference between pupils in the SSP sample and the norm group occurs at 6th class level, where 3 fewer items are answered correctly by pupils in our sample than in the norm group.

Table 11. Average mathematics raw scores (number of items correct out of a total of 25-30 items depending on grade level) at each grade level in 2007, 2010 and 2013.

Grade level	2007	2010	2013	Norm group average
2nd class	13.8	15.0	16.1	18.0
3rd class	11.6	12.2	14.0	15.5
5th class	—	11.7	13.2	16.0
6th class	10.9	11.4	12.5	15.5

Low- and high-scorers in mathematics

The percentage of pupils achieving very low test scores (at or below the 10th percentile) decreased between 2007 and 2010, and decreased further between 2010 and 2013 (Table 12). By 2013, pupils in 2nd and 3rd class were not too far from the national average of 10%, although the discrepancy between the percentage of low-scorers in the SSP sample and the national sample can be seen to increase as grade level rises. However, even at 6th class level where the difference between the samples is most obvious, there has been a large reduction (8.5%) in the percentage of pupils with very low scores since baseline data were collected in 2007.

Table 12. Percentages of pupils scoring at or below the 10th percentile in mathematics at each grade level in 2007, 2010 and 2013.

Grade level	2007	2010	2013	Norm group average
2nd class	21.8%	16.8%	12.7%	10.0%
3rd class	24.1%	21.0%	13.8%	10.0%
5th class	—	25.1%	18.8%	10.0%
6th class	31.1%	28.3%	22.6%	10.0%

As was the case in reading, the decrease in the percentage of SSP pupils with low scores in mathematics has not been accompanied by a decrease in the percentage of pupils with very high scores (i.e., at or above the 90th percentile). In fact, the percentage of high-scoring pupils increased at all grade levels between 2007 and 2010, and increased further between 2010 and 2013 (Table 13). The percentage of high-scoring pupils more than doubled at 2nd and 3rd class levels over the 6-year period, while in 2013 the percentage of high-scorers in mathematics at 3rd class level slightly exceeded that in the norm group.

Table 13. Percentages of pupils scoring at or above the 90th percentile in mathematics at each grade level in 2007, 2010 and 2013.

Grade level	2007	2010	2013	Norm group average
2nd class	2.8%	4.5%	6.1%	10.0%
3rd class	5.4%	7.3%	11.2%	10.0%
5th class	—	4.7%	8.3%	10.0%
6th class	4.1%	5.5%	7.3%	10.0%

A comparison of mathematics achievement in 2007, 2010 and 2013

Figure 3 shows mathematics standard scores at each grade level and how the average scores of pupils in the SSP compare with the norm group average of 100. The most obvious feature of the chart is how the coloured lines representing the achievements of pupils in the SSP have tended to converge with the line representing the norm group over the 6-year period. Furthermore, it can be seen that convergence is least marked at 6th class level and most marked at 3rd class level. While the increase in mathematics at 2nd class level has been steady, the crossed lines of 2nd and 3rd class levels indicate a striking rise in the achievements of pupils in 3rd class between 2010 and 2013.

Figure 3. Mathematics standard scores of 2nd, 3rd, 5th and 6th class pupils in 2007, 2010, and 2013.
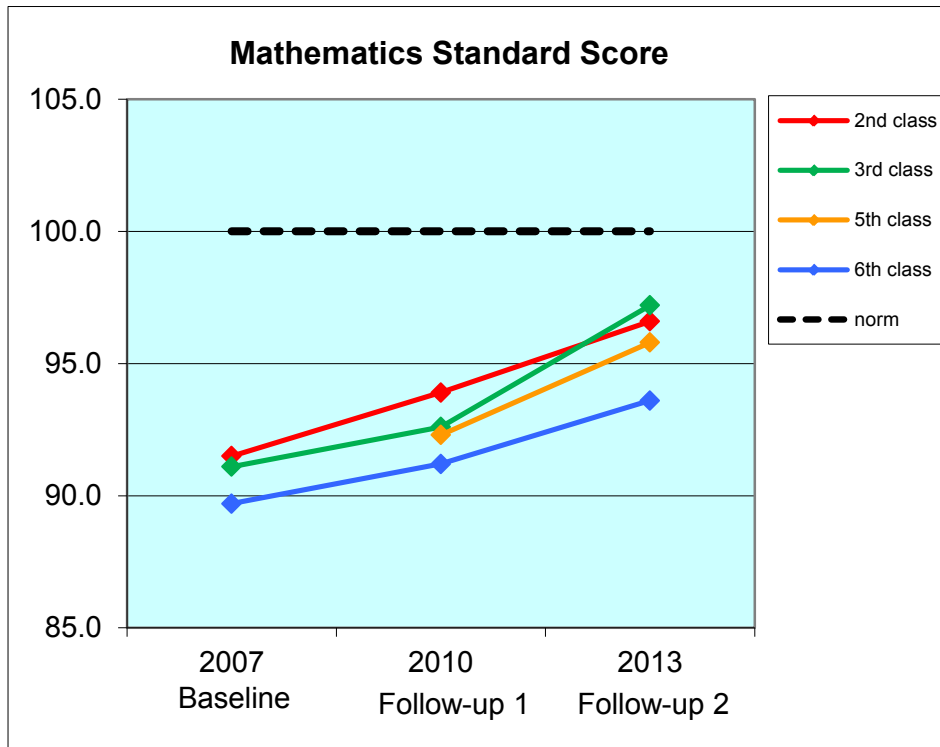
Mathematics achievement according to DEIS Band

As was the case with reading achievement, mathematics achievement is related to the socioeconomic profile of the school. As Table 14 shows, in all three test administrations and at each grade level, the achievements of pupils in Band 1 schools were poorer than those of pupils in Band 2 schools. There appears to be a much greater reduction in the percentage of low-scorers in Band 1 schools than in Band 2 schools (although the potential for improvement in Band 1 schools was undoubtedly much greater). For example, the percentage of 2nd class pupils scoring at or below the 10th percentile reduced by 11.1% in Band 1 schools compared with 6.3% in Band 2 schools, while at 3rd class level the reductions were 14.7% and 5.4% respectively.

Table 14. Average mathematics raw score, and percentages (in brackets) of pupils in Band 1 and Band 2 scoring at or below the 10th percentile at each grade level in 2007, 2010 and 2013.

Grade level	2007		2010		2013		Norm group average
	Band 1	Band 2	Band 1	Band 2	Band 1	Band 2	
2nd class	12.9 (26.9%)	15.0 (15.5%)	14.1 (19.6%)	16.0 (13.6%)	15.3 (15.8%)	17.1 (9.2%)	18.0 (10.0%)
3rd class	10.1 (31.4%)	13.2 (15.9%)	11.2 (25.8%)	13.3 (15.7%)	13.3 (16.7%)	14.8 (10.5%)	15.5 (10.0%)
5th class	—	—	10.6 (31.4%)	13.1 (17.3%)	12.1 (23.3%)	14.6 (13.6%)	16.0 (10.0%)
6th class	9.3 (39.2%)	12.6 (22.1%)	9.7 (37.3%)	13.3 (18.1%)	11.4 (28.6%)	13.7 (15.9%)	15.5 (10.0%)

Longitudinal comparisons of mathematics achievement

The longitudinal data indicated that pupils who had participated in the testing in 2010 improved their scores significantly when retested in 2013. This was particularly the case of the 2nd to 5th class cohort, whose average standard score rose by three full standard score points.

Table 15. Mathematics standard scores of 2nd class pupils in 2010 and their follow-up scores in 5th class in 2013, and mathematics standard scores of 3rd class pupils in 2010 and their follow-up scores in 6th class in 2013.

	Mathematics		
Cohort	2010	2013	Norm group average
2nd — 5th (*N*=2,597)	94.2	97.2	100
3rd — 6th (*N*=3,495)	93.4	94.1	100

Achievement in reading and mathematics at school level

So far, the outcomes of testing have only been described at individual level. However, it is also possible to describe the average achievements over time of pupils in *schools* in the sample. A thorough examination of this is beyond the scope of this report, but Table 16 gives a very broad indication of how pupils performed at school level in reading and mathematics between 2007 and 2013. For the purpose of grouping schools for the table, schools were assigned to one of three categories for each of reading and mathematics. Group 1 contains schools that decreased their average reading or mathematics score between 2007 and 2010 and again between 2010 and 2013; Group 2 contains schools that increased their average reading or mathematics score between 2007 and 2010 and again between 2010 and 2013; and the schools in Group 3 had mixed outcomes over the period. The table shows that (with the exception of 2nd class reading) most schools fall into the last category in that they experienced a mixture of outcomes over the 6-year period. However, Table 16 also reveals that a far greater number of schools showed increases on both occasions than showed decreases on both occasions. There are very few schools in the first row (between one and nine, depending on grade level), compared with the group of between 38 and 55 in the second row that increased their average score on both occasions. As there is no attempt to describe the magnitude of these increases and decreases (or whether or not they are significant in statistical terms), the data should be regarded as indicative, and require much more detailed examination. The general pattern that emerges, however, is consistent with the cross-sectional and longitudinal comparisons (i.e., the pattern is one of improvement rather than of disimprovement).

Table 16. Number and percentage of schools showing increases, decreases, and a mixed pattern of change in their average reading test scores at each grade level since 2007.

	Reading			Mathematics		
	2nd (N=100)	3rd (N=112)	6th (N=113)	2nd (N=100)	3rd (N=112)	6th (N=113)
Group 1 - Decrease between 2007/2010 **and** between 2010/2013	4 4.0%	3 2.7%	9 8.0%	5 5.0%	5 4.5%	9 8.0%
Group 2 – Increase between 2007/2010 **and** between 2010/2013	55 55.0%	50 44.6%	44 38.9%	41 41.0%	44 39.3%	38 33.6%
Group 3 - Mixture of increases & decreases between 2007/2010 and 2010/2013	41 41.0%	59 52.7%	60 53.1%	54 54.0%	63 56.2%	66 58.4%

Conclusion

This report has attempted to summarise achievement outcomes over the early years of the SSP under DEIS. The results are very encouraging, indicating that test scores at all grade levels increased significantly between the collection of baseline data in 2007 and follow-up testing in 2010. Furthermore, outcomes from the most recent round of testing in spring of 2013 indicated that, not only were the initial gains maintained, they were built on between 2010 and 2013. The gains are particularly evident in the junior grades and in schools that have high levels of disadvantage. While there has been a striking reduction in low-scorers (as evidenced by very large decreases in the percentages of pupils scoring at or below the 10th percentile in both reading and mathematics), the percentage of high achievers in both subject areas has been maintained, and in some cases, increased.

It should be noted, however, that the design of the testing programme has a major limitation. The limitation relates to the absence of a control group with which the achievements of pupils in the SSP sample could be compared. Such a group would typically have been similar in all respects - including level of disadvantage - to schools in our sample, but would not have been allocated any additional resources of the kind that SSP schools receive under DEIS. Had such a group existed, the achievements of pupils in both samples could have been compared over time to more accurately assess the impact of the SSP. Without it, we cannot be certain that the improvements are not part of a general improvement in reading and mathematics achievement nationally. However, the outcomes of a series of national assessments in reading and mathematics that have taken place over the past couple of decades indicate that no major changes in reading standards have occurred. If that pattern has changed recently, it will emerge in the results of the national assessments of reading and mathematics due to take place in 2014. In this regard, it may be worth noting that the National Literacy and Numeracy Strategy (Department of Education and Skills, 2011) requires schools not only to administer standardised tests to 2nd, 4th, and 6th class pupils but to report, in aggregated form, the results of such testing to boards of management and the DES. As a result, it is likely that pupils are experiencing increased exposure to tests of the kind used in the evaluation and that the stakes associated with such testing may be perceived as having risen.

Notwithstanding the concerns that were raised regarding the reason for the improvements, the observed gains need to be considered in light of a number of factors that might have been expected to lead to a *disimprovement* in achievement over the 6-year period. First, absence rates were lower in 2010 than in 2007 and reduced further in 2013. This means that potentially more poorly performing children were present for the tests in 2013 when the highest average test scores were achieved than in 2007 or 2010. Second, fewer pupils were exempted by teachers in 2010 than was the case in 2007 or 2013 (recall that exemptions were based on pupils' inability to attempt the test due to a range of factors including

learning disabilities and poor ability in English). The fact that, in 2013, less than 1% of pupils were exempted makes the average achievements more impressive. Third, it is likely that since the programme began, families served by the schools have been experiencing the economic effects of the recession. In other words, levels of disadvantage are likely to have increased in schools in our sample.

Further, more detailed, analysis of the data including data from specific sub-groups (e.g., pupils whose home language is not English or Irish) will be the subject of future reports. Work has begun on investigating why some participating schools have made large gains while others have not. It will be necessary to focus on schools where large gains have occurred because there are so few schools that have not shown at least one. A range of home, pupil, and school factors are being examined as part of the analysis. For example, the level of engagement in planning for DEIS is one of the factors that might be implicated at school level, whereas the ways in which pupils spend their leisure time might be related to achievement at pupil level.

The evaluation of the programme is ongoing, and we will continue to ask schools to participate in evaluation activities from time to time. These activities might include visits to schools, participating in focus groups or interviews, and completing questionnaires. It is also hoped to continue to monitor achievement in schools in the programme, either as standalone exercises, or as part of other studies (e.g., national assessments).

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