

The Impact of DEIS on Class Size in Primary Schools

Susan Weir and Laura McAvinue

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The Educational Research Centre has been carrying out an evaluation of DEIS (Delivering Equality of Opportunity in Schools) on behalf of the Department of Education and Skills since the programme's introduction in 2006/2007. A recent report on the evaluation that focused mainly on pupil outcomes also dealt briefly with some implementation issues (i.e., the extent to which the programme as originally outlined had become a reality in schools) (Weir & Archer, 2011). However, the report also signalled that implementation issues would be the focus of future, more detailed, investigation. This paper is the first in a series investigating such issues, and is concerned with the extent to which class size targets have been met in participating schools.

A policy of positive discrimination in the form of reductions in class size in schools serving disadvantaged communities has been a government priority since the 1980s (Weir, Archer, & McAvinue, 2010). The allocation of concessionary teaching posts to schools serving disadvantaged areas began with the introduction in 1984 of the Disadvantaged Areas Scheme (DAS). In 1996, the Breaking the Cycle (BTC) scheme was introduced to support schools with the highest concentrations of children from disadvantaged backgrounds. Under this scheme, 32 urban primary schools were allocated extra staffing to allow for a maximum class size of 15 in all junior classes and 27 in senior classes. The initiative that followed in 2001 - Giving Children an Even Break (GCEB) - targeted a larger number of schools. While most schools received some financial allocation under the scheme, the aspect of GCEB that was most valued by the 238 urban schools with the highest assessed levels of disadvantage was the allocation of additional teaching posts to reduce the size of junior classes to a maximum of 20 and to 27 at senior level (Weir, Archer, Pembroke, & McAvinue, 2007). Previous studies examining the extent to which class size targets were met confirmed that class size had been significantly reduced in participating schools. For example, in 2004/2005, 73.7% of junior classes in schools participating in GCEB were comprised of 20 or fewer pupils. This percentage far exceeded the equivalent for all classes nationally, where only 27% of all junior classes had 20 or fewer pupils (Weir et al., 2007; Weir et al., 2010).

DEIS is the most recent government scheme for tackling educational disadvantage. The document outlining the DEIS scheme (Department of Education and Science, 2005) contained a commitment to have maximum junior class sizes of 20 and maximum senior class sizes of 24 in urban / town primary schools with the highest concentrations of disadvantage. On the basis of responses to a nationwide survey conducted by the ERC and completed by principals in 2005 on the socioeconomic characteristics of pupils in their schools, schools were rank ordered according to their assessed levels of disadvantage. Subsequently, the 199 schools with the highest concentrations of disadvantage were assigned to DEIS Band 1, and a further 144 were assigned to DEIS Band 2. Those in Band 1 were targeted for a reduction in class size. While the rest of the urban / town primary schools participating in DEIS (i.e., those in Band 2) received a variety of supports, they did not receive an allocation of additional teaching posts to reduce class size¹.

The purpose of the current paper is twofold. The first is to examine the extent to which these planned reductions in class size were implemented in urban schools participating in Band 1 of DEIS. The second is to seek evidence of positive discrimination towards schools in DEIS (in terms of numbers in classes compared with non-participating schools).

The Analysis

The analysis was conducted using data provided by the Department of Education and Skills on the size of all classes in the system in the school year of 2009/2010. While the data provided by the Department related to classes, the associated roll number enabled the classification of each class as belonging to a school participating in Urban DEIS Band 1, Urban DEIS Band 2, Rural DEIS or not participating in DEIS. A total of 20,317 classes were listed in the 2009/2010 database. Of these, 11,178 were urban and 7,878 were rural. The following analysis pertains to urban classes only and excludes classes for which location was missing ($n=1,261$ classes). It is worth noting that none of the classes for which location was missing was participating in DEIS. To facilitate comparisons with data on class size in

¹ Strictly speaking, almost all schools in the system participate in DEIS in the sense, for example, that they receive financial support based on their level of disadvantage. The terms Bands 1 and 2 were originally meant to be confined to schools in the School Support Programme (those schools in DEIS with the highest levels of assessed disadvantage). However, in popular usage, the term DEIS tends to be used to refer to schools that are in the School Support Programme, that usage is maintained here.

GCEB, the methodology adopted here largely follows that used in the earlier analyses by Weir et al. (2007). Specifically, the analysis is limited to single grade classes and excludes consecutive or multi-grade classes, as the majority of classes in urban schools ($n=10,041$; 89.8%) are single grade. The analysis is limited to pupils in ordinary classes and figures do not include pupils from the Traveller community or pupils with special educational needs as these pupils were not taken into account when concessionary posts were being allocated. This has implications for the interpretation of data in Tables 1 – 15 and Table 18, as descriptions of the size of ordinary classes do not include the number of pupils from the Traveller community or with special educational needs in these classes. However, comparative analyses including pupils from the Traveller community and those with special educational needs are presented in a later section. The analyses are presented separately for junior classes (junior infants, senior infants, first class, and second class) ($n=5,405$) and senior classes (third class, fourth class, fifth class, and sixth class) ($n=4,636$) to examine whether the respective targets of maximum class sizes of 20 and 24 had been achieved in urban DEIS Band 1 schools in the 2009/2010 school year.

To what extent have maximum junior class sizes of 20 been implemented in urban DEIS Band 1 schools?

Table 1 presents descriptive statistics for class size of junior classes according to DEIS status. The average class size of Band 1 junior classes of 17.43 ($SD = 3.78$) was below the maximum class size target of 20. This figure compared favourably with the average class size of all junior classes in the system (23.85, $SD = 5.43$) and particularly favourably with the average size of junior classes in non-DEIS schools (26.35, $SD = 3.93$). The average size of classes in Band 2 schools was 21.93 ($SD = 4.76$). While this figure was higher than the average class size for Band 1 schools, it was much lower than the average class size of schools not participating in DEIS.

Table 1. Average class size of urban, single grade, junior classes, and minimum and maximum values², according to DEIS status in 2009/2010.

DEIS Status	N	Average (SD)	Min	Max
Band 1	1,147	17.43 (3.78)	5	38
Band 2	736	21.93 (4.76)	10	37
Non-DEIS	3,522	26.35 (3.93)	11	39
All Classes	5,405	23.85 (5.43)	5	39

Tables 2 – 5 present a description of DEIS Band 1, DEIS Band 2, non-DEIS and all classes in terms of class size categories (i.e., the number and percentage of classes with ≤ 20 , 21-24, 25-29 and ≥ 30 pupils). The target maximum class size of 20 was achieved for almost 80% of all junior classes participating in DEIS Band 1 (Table 2). This figure compares very favourably with the figure for all schools, where just under 30% of all classes had a class size of 20 or fewer pupils (Table 5). It compares even more favourably with classes in non-DEIS schools, of which only 8.9% had 20 or fewer pupils (Table 4), making junior classes with a maximum of 20 pupils 9 times more common in DEIS Band 1 schools than in non-DEIS schools. Small class sizes were also evident in a substantial proportion of DEIS Band 2 schools, with class sizes of 20 or fewer pupils being 5 times more common in DEIS Band 2 classes (43.6%, Table 3) than in non-DEIS classes (8.9%, Table 4).

The impact of the policy was also evident at the upper end of the scale. Only 2.6% of classes in DEIS Band 1 schools had a class size of 25 or more pupils (Table 2) while 71.7% of non-DEIS classes had over 25 pupils with 20.2% being over 30 (Table 4). The corresponding figure for DEIS Band 2 classes was 32.7% (Table 3). Classes with 25 or more pupils were, therefore, 28 times more likely in non-DEIS schools than in DEIS Band 1 schools.

² The minimum and maximum values (5-39 pupils) reported here clearly contain some extreme anomalies. A sample of such anomalous values was further investigated, and in all cases, very small class sizes were found to be accounted for by the exclusion from the class totals of pupils from the Traveller community and those with Special Educational Needs. This issue is dealt with in more detail later in the report.

There was also evidence that the reduction in class size in DEIS Band 1 schools was applied rather uniformly across the junior classes from junior infants to first class, with a slight increase in class size in second class. For example, 72.7% of second classes in DEIS Band 1 schools had 20 or fewer pupils while the corresponding figure for junior infants to first class was just over 80%. Similarly, 6.2% of second classes had 25 or more pupils while the corresponding figure for junior infants to first class was 2% or less (Table 2). Examination of the classes in DEIS Band 2 and non-DEIS schools (Tables 3 & 4) presented a less uniform picture of class size across the grades, with the largest percentage of classes with 20 or fewer pupils tending to be in the junior infant grade, and the percentage tending to decline with increasing grade, suggesting a prioritisation of the extreme junior end of the school (Tables 3 & 4). This prioritisation is also evident in Table 5 in which data for all urban schools are presented.

Table 2. The number and percentage of junior single grade classes in urban **DEIS Band 1** schools that had 20 or fewer pupils, 21-24 pupils, 25-29 pupils or 30 or more pupils in 2009/2010.

Number in Class	All Junior Classes (n=1,147)	Junior Infants (n=299)	Senior Infants (n=300)	First Class (n=288)	Second Class (n=260)
≤ 20	910 (79.3%)	242 (80.9%)	245 (81.7%)	234 (81.3%)	189 (72.7%)
21-24	207 (18.0%)	51 (17.1%)	52 (17.3%)	49 (17.0%)	55 (21.2%)
25-29	29 (2.5%)	6 (2.0%)	3 (1%)	5 (1.7%)	15 (5.8%)
≥ 30	1 (.1%)	0	0	0	1 (.4%)

Table 3. The number and percentage of junior single grade classes in urban **DEIS Band 2** schools that had 20 or fewer pupils, 21-24 pupils, 25-29 pupils or 30 or more pupils in 2009/2010.

Number in Class	All Junior Classes (n=736)	Junior Infants (n=200)	Senior Infants (n=187)	First Class (n=185)	Second Class (n=164)
≤ 20	321 (43.6%)	107 (53.5%)	82 (43.9%)	75 (40.5%)	57 (34.8%)
21-24	174 (23.6%)	39 (19.5%)	44 (23.5%)	49 (26.5%)	42 (25.6%)
25-29	212 (28.8%)	48 (24.0%)	50 (26.7%)	53 (28.6%)	61 (37.2%)
≥ 30	29 (3.9%)	6 (3.0%)	11 (5.9%)	8 (4.3%)	4 (2.4%)

Table 4. The number and percentage of junior single grade classes in urban **non-DEIS** schools that had 20 or fewer pupils, 21-24 pupils, 25-29 pupils or 30 or more pupils in 2009/2010.

Number in Class	All Junior Classes (n=3,522)	Junior Infants (n=949)	Senior Infants (n=884)	First Class (n=857)	Second Class (n=832)
≤ 20	313 (8.9%)	150 (15.8%)	69 (7.8%)	39 (4.6%)	55 (6.6%)
21-24	683 (19.4%)	217 (22.9%)	187 (21.2%)	158 (18.4%)	121 (14.5%)
25-29	1813 (51.5%)	443 (46.7%)	465 (52.6%)	480 (56.0%)	425 (51.1%)
≥ 30	713 (20.2%)	139 (14.6%)	163 (18.4%)	180 (21.0%)	231 (27.8%)

Table 5. The number and percentage of junior single grade classes in **all urban** schools that had 20 or fewer pupils, 21-24 pupils, 25-29 pupils or 30 or more pupils in 2009/2010.

Number in Class	All Junior Classes (n=5,405)	Junior Infants (n=1,448)	Senior Infants (n=1,371)	First Class (n=1,330)	Second Class (n=1,256)
≤ 20	1544 (28.6%)	499 (34.5%)	396 (28.9%)	348 (26.2%)	301 (24.0%)
21-24	1064 (19.7%)	307 (21.2%)	283 (20.6%)	256 (19.2%)	218 (17.4%)
25-29	2054 (38.0%)	497 (34.3%)	518 (37.8%)	538 (40.5%)	501 (39.9%)
≥ 30	743 (13.7%)	145 (10.0%)	174 (12.7%)	188 (14.1%)	236 (18.8%)

Table 6 presents an analysis of the class size of the 20.7% of classes in DEIS Band 1 schools that had more than 20 pupils. The majority of these classes missed the target by a small margin with 87.3% of them having a class size of between 21 and 24. Indeed, 97.3% of junior classes in Urban DEIS Band 1 schools had 24 or fewer pupils (Table 2). In sum, the target maximum junior class size of 20 was met for the vast majority of classes in urban Band 1 schools and the majority of classes which exceeded the target class size did so by a small margin. Evidence of positive discrimination towards these schools was easily discerned from the comparison with non-DEIS schools, which had, for example, a much higher average class size. There was also evidence of positive discrimination in favour of Band 2 schools. Although these schools were not allocated additional teaching posts under DEIS, it is likely that the retention of teaching posts allocated under previous schemes led to the persistence of smaller classes in these schools.

Table 6. A breakdown of the number and percentage of junior single grade classes in urban **DEIS Band 1** schools that had more than 20 pupils in 2009/2010.

Number in Class	All Junior Classes (n=237)	Junior Infants (n=57)	Senior Infants (n=55)	First Class (n=54)	Second Class (n=71)
21	80 (33.8%)	17 (29.8%)	19 (34.5%)	22 (40.7%)	22 (31.0%)
22	65 (27.4%)	14 (24.6%)	18 (32.7%)	15 (27.8%)	18 (25.4%)
23	43 (18.1%)	14 (24.6%)	11 (20.0%)	11 (20.4%)	7 (9.9%)
24	19 (8.0%)	6 (10.5%)	4 (7.3%)	1 (1.9%)	8 (11.3%)
25	14 (5.9%)	4 (7.0%)	2 (3.6%)	3 (5.6%)	5 (7.0%)
26	7 (3.0%)	1 (1.8%)	1 (1.8%)	1 (1.9%)	4 (5.6%)
27	4 (1.7%)	-	-	-	4 (5.6%)
28	3 (1.3%)	1 (1.8%)	-	1 (1.9%)	1 (1.4%)
29	1 (.4%)	-	-	-	1 (1.4%)
38	1 ³ (.4%)	-	-	-	1 (1.4%)

³ This second class that had a class size of 38 is clearly anomalous. This class is in a school which had only this one class in the junior end of the school but all grades with normal class sizes (ranging from 19 to 27) at the senior end of the school. Further investigated revealed that the information appeared to be correct (i.e., that this was the number reported by the school).

To examine patterns of pupil numbers in classes with fewer than 20 pupils, Table 7 shows the frequencies with which numbers at or below 20 were found in Band 1 schools in 2009/2010.

Table 7. The number and percentage of junior single grade classes in urban **DEIS Band 1** schools that had 20 or fewer pupils in 2009/2010.

Number in Class	All Junior Classes (n=910)	Junior Infants (n=242)	Senior Infants (n=245)	First Class (n=234)	Second Class (n=189)
20	102 (8.9%)	17 (5.7%)	31 (10.3%)	34 (11.8%)	22 (7.6%)
19	107 (9.3%)	21 (7.0%)	31 (10.3%)	28 (9.7%)	27 (10.4%)
18	128 (11.2%)	37 (12.4%)	35 (11.7%)	27 (9.4%)	29 (11.2%)
17	125 (10.9%)	38 (12.7%)	21 (7.0%)	37 (12.8%)	29 (11.2%)
16	109 (9.5%)	22 (7.4%)	32 (10.7%)	28 (9.7%)	27 (10.4%)
15	98 (8.5%)	26 (8.7%)	26 (8.7%)	30 (10.4%)	16 (6.2%)
14	71 (6.2%)	25 (8.4%)	18 (6.0%)	14 (4.9%)	14 (5.4%)
13	50 (4.4%)	13 (4.3%)	16 (5.3%)	8 (2.8%)	13 (5.0%)
12	52 (4.5%)	23 (7.7%)	11 (3.7%)	15 (5.2%)	3 (1.2%)
11	33 (2.9%)	8 (2.7%)	14 (4.7%)	6 (2.1%)	5 (1.9%)
10	13 (1.1%)	5 (1.7%)	4 (1.3%)	2 (.7%)	2 (.8%)
9	10 (1.0%)	3 (1.0%)	2 (.7%)	3 (1.0%)	2 (.8%)
8	4 (.3%)	1 (.3%)	2 (.7%)	1 (.3%)	-
7	4 (.3%)	2 (.7%)	1 (.3%)	-	1 (.4%)
6	3 (.3%)	1 (.3%)	1 (.3%)	1 (.3%)	-
5	1 (.1%)	-	-	-	1 (.4%)

As the table shows, a considerable number of classes in schools in Band 1 had fewer than 20 pupils. Indeed, it would be expected that some classes would have as few as 15 pupils due to their previous participation in Breaking the Cycle. However, it is somewhat surprising that

241 classes contained fewer than 15 pupils, with 120 of these containing 12 or fewer pupils. It should be pointed out, however, that this figure of 120 includes some very small classes. Classes with 10 or fewer pupils (of which there were 35 such classes across 15 schools) were the subject of further investigation. This revealed that several of these classes had large numbers of pupils from the Traveller community or with special educational needs. When such pupils were added to the total of ordinary class pupils, the class sizes reverted to levels that could be considered normal.

While participation in Breaking the Cycle might have been expected to impact on the number of very small classes in Band 1 schools, this should not have been an issue among those in Band 2, as none was in Breaking the Cycle. Some schools in Band 2 were allocated additional posts under GCEB, but only to allow them to operate maximum junior class sizes of 20. In theory, therefore, the junior class sizes under GCEB are no different than they are under Band 2 of DEIS. To investigate this further, the average junior class sizes in 2009/2010 were calculated for schools participating in previous initiatives aimed at addressing disadvantage (Table 8). The table shows that, among Band 1 schools, those that had previously participated in the DAS and BTC had the lowest average junior class size (13.6), while those that had not participated in any scheme had the highest average (19.0). The situation was similar among Band 2 schools, where those that had participated in DAS and GCEB (there were no Band 2 schools in BTC) had the lowest average class size (18.92) compared with those that had not participated in any scheme (25.08)

Table 8. Average class size of urban Band 1, Band 2 and non-DEIS single grade junior classes according to participation in the previous initiatives, DAS, BTC and GCEB Above Postbar in 2009/2010.

Classes	Band 1	Band 2	Non-DEIS
All	17.43 (n = 1,147, SD = 3.78)	21.93 (n = 736, SD = 4.76)	26.35 (n = 3,522, SD = 3.93)
Not in any previous scheme	19.00 (n = 19, SD = 4.24)	25.08 (n = 197, SD = 3.64)	26.50 (n = 3,362, SD = 3.84)
In all three previous schemes	14.80 (n = 169, SD = 3.17)	/	/
In DAS & in BTC but not in GCEB	13.60 (n = 15, SD = 2.77)	/	/
In BTC & GCEB but not in DAS	/	/	/
In DAS & GCEB but not BTC	17.93 (n = 722, SD = 3.27)	18.92 (n = 185, SD = 3.46)	21.55 (n = 51, SD = 3.67)
In DAS only	18.06 (n = 97, SD = 4.98)	22.95 (n = 146, SD = 4.72)	25.26 (n = 76, SD = 4.02)
In BTC only	/	/	/
In GCEB only	18.22 (n = 50, SD = 3.97)	19.88 (n = 145, SD = 4.16)	20.55 (n = 33, SD = 4.58)

Note. GCEB Above Postbar refers to schools that were eligible for additional teaching posts due to high levels of disadvantage.

A similar breakdown of average class size according to participation in schemes for disadvantage was produced at senior level (Table 9). This shows that among Band 1 schools, those that had participated in all three schemes had the lowest average number of pupils at senior level (18.55), while those that were in GCEB only and that had not been in any previous scheme had the highest averages (at 20.91 & 20.50 respectively). Among Band 2 schools, the lowest average senior class size (22.20) was found among those that had been in DAS and GCEB (recall that none was in BTC), and the highest (24.96) was among those that had not previously participated in any scheme. It appears, therefore, that participation in previous schemes conferred a decided advantage in terms of average class size in 2009/2010.

Table 9. Average class size of urban Band 1, Band 2 and non-DEIS single grade senior classes according to participation in the previous initiatives, DAS, BTC and GCEB Above Postbar in 2009/2010.

Classes	Band 1	Band 2	Non-DEIS
All	19.42 (n = 895, SD = 4.42)	24.16 (n = 584, SD = 4.33)	27.08 (n = 3,157, SD = 3.92)
Not in any previous scheme	20.50 (n = 22, SD = 4.47)	24.96 (n = 198, SD = 4.09)	27.15 (n = 3,042, SD = 3.88)
In all three previous schemes	18.55 (n = 119, SD = 3.82)	/	/
In DAS & in BTC but not in GCEB	18.38 (n = 8, SD = 3.74)	/	/
In BTC & GCEB but not in DAS	/	/	/
In DAS & GCEB but not BTC	19.43 (n = 559, SD = 4.26)	22.20 (n = 117, SD = 4.09)	24.05 (n = 20, SD = 3.46)
In DAS only	19.91 (n = 109, SD = 4.79)	24.88 (n = 144, SD = 4.22)	26.48 (n = 71, SD = 4.71)
In BTC only	/	/	/
In GCEB only	20.91 (n = 32, SD = 4.41)	23.43 (n = 102, SD = 4.12)	23.46 (n = 24, SD = 3.87)

Note. GCEB Above Postbar refers to schools that were eligible for additional teaching posts due to high levels of disadvantage.

To what extent have maximum senior class sizes of 24 or below been implemented in urban DEIS Band 1 schools?

Table 10 presents descriptive statistics for class size of senior classes according to DEIS status. The average class size of Band 1 senior classes was 19.42 ($SD=4.42$), which was well below the target maximum class size of 24. This figure compared favourably with the average senior class size for all classes (25.24, $SD=5.06$) and classes in non-DEIS schools (27.08, $SD=3.92$). The average class size for Band 2 classes (24.16, $SD=4.33$) was just at the Band 1 target of 24 and was lower than that for non-DEIS classes.

Table 10. Average class size of urban, single grade, senior classes according to DEIS status in 2009/2010.

DEIS Status	N	Average (SD)	Min	Max
Band 1	895	19.42 (4.42)	7	38
Band 2	584	24.16 (4.33)	12	43
Non-DEIS	3,157	27.08 (3.92)	12	40
All Classes	4,636	25.24 (5.06)	7	43

Tables 11 to 14 present a description of DEIS Band 1, DEIS Band 2, non-DEIS and all senior classes in terms of class size categories (i.e., the number and percentage of classes with ≤ 24 , 25-29 and ≥ 30 pupils). The target maximum class size of 24 was achieved for 86.8% of Band 1 classes (Table 11). Just over half (51.7%) of Band 2 classes also had 24 or fewer pupils (Table 12). These figures compare favourably with the corresponding figure for all classes, of which 38.7% had 24 or fewer pupils (Table 14) and especially with the corresponding figure for non-DEIS classes, of which just over one fifth (22.7%, Table 13) had 24 or fewer pupils. Classes with 24 or fewer pupils were, therefore, 4 times more common in Band 1 schools and twice as common in Band 2 schools than in non-DEIS schools.

The impact of the initiative is perhaps even more obvious when examining larger class sizes. The percentage of classes with 30 or more pupils was less than 1% in Band 1 schools (Table 11), 10.3% in Band 2 Schools (Table 12), 28.6% in non-DEIS schools (Table 13) and 20.9% across all classes (Table 14). Large class sizes (≥ 30) were 36 times more common in non-DEIS schools than in Band 1 schools.

Similar to the findings in relation to the junior classes, but even more so, the additional staff seemed to be allocated uniformly across the senior grades. For example, the percentage of DEIS Band 1 classes with 24 or fewer pupils ranged from 86% to 88.3% from third to sixth class (Table 11). The distribution of small class size across the grades was not as even in Band 2 (Table 12) or non-DEIS (Table 13) schools. For example, in non-DEIS schools,

28.2% of sixth classes had 24 or fewer pupils while only 18% of third classes benefited from this small class size (Table 13). Only 13.2% of Band 1 senior classes exceeded a class size of 24 (Table 11). Table 15 presents a detailed breakdown of the size of these classes. The majority of these classes exceeded the target by a small margin, with just under 85% missing the target by one, two, or three pupils.

In sum, it would appear that the target maximum class size of 24 was met for the vast majority of senior classes in DEIS Band 1 schools. Comparisons between classes in schools of differing DEIS status in terms of average class size and the percentage of pupils in small and large classes provided clear evidence of positive discrimination in favour of Band 1, and also to a great extent, Band 2, classes.

Table 11. The number and percentage of senior single grade classes in urban **DEIS Band 1** schools that had 24 or fewer pupils, 25-29 pupils or 30 or more pupils in 2009/2010.

Number in Class	All Senior Classes (n=895)	Third Class (n=225)	Fourth Class (n=214)	Fifth Class (n=226)	Sixth Class (n=230)
≤ 24	777 (86.8%)	194 (86.2%)	184 (86%)	196 (86.7%)	203 (88.3%)
25-29	111 (12.4%)	28 (12.4%)	29 (13.6%)	29 (12.8%)	25 (10.9%)
≥ 30	7 (.8%)	3 (1.3%)	1 (.5%)	1 (.4%)	2 (.9%)

Table 12. The number and percentage of senior single grade classes in urban **DEIS Band 2** schools that had 24 or fewer pupils, 25-29 pupils or 30 or more pupils in 2009/2010.

Number in Class	All Senior Classes (n=584)	Third Class (n=146)	Fourth Class (n=140)	Fifth Class (n=149)	Sixth Class (n=149)
≤ 24	302 (51.7%)	71 (48.6%)	75 (53.6%)	71 (47.7%)	85 (57%)
25-29	222 (38.0%)	63 (43.2%)	52 (37.1%)	64 (43.0%)	43 (28.9%)
≥ 30	60 (10.3%)	12 (8.2%)	13 (9.3%)	14 (9.4%)	21 (14.1%)

Table 13. The number and percentage of senior single grade classes in urban **non-DEIS** schools that had 24 or fewer pupils, 25-29 pupils or 30 or more pupils in 2009/2010.

Number in Class	All Senior Classes (n=3,157)	Third Class (n=787)	Fourth Class (n=779)	Fifth Class (n=779)	Sixth Class (n=812)
≤ 24	717 (22.7%)	142 (18.0%)	189 (24.3%)	157 (20.2%)	229 (28.2%)
25-29	1538 (48.7%)	415 (52.7%)	366 (47.0%)	391 (50.2%)	366 (45.1%)
≥ 30	902 (28.6%)	230 (29.2%)	224 (28.8%)	231 (29.7%)	217 (26.7%)

Table 14. The number and percentage of senior single grade classes in **all urban** schools that had 24 or fewer pupils, 25-29 pupils or 30 or more pupils in 2009/2010.

Number in Class	All Senior Classes (n=4,636)	Third Class (n=1,158)	Fourth Class (n=1,133)	Fifth Class (n=1,154)	Sixth Class (n=1,191)
≤ 24	1,796 (38.7%)	407 (35.1%)	448 (39.5%)	424 (36.7%)	517 (43.4%)
25-29	1,871 (40.4%)	506 (43.7%)	447 (39.5%)	484 (41.9%)	434 (36.4%)
≥ 30	969 (20.9%)	245 (21.2%)	238 (21.0%)	246 (21.3%)	240 (20.2%)

Table 15. A breakdown of the number and percentage of senior single grade classes in urban **DEIS Band 1** schools that had more than 24 pupils in 2009/2010.

Number in Class	All Senior Classes (n=118)	Third Class (n=31)	Fourth Class (n=30)	Fifth Class (n=30)	Sixth Class (n=27)
25	51 (43.2%)	10 (32.3%)	12 (40.0%)	15 (50.0%)	14 (51.9%)
26	30 (25.4%)	11 (35.5%)	3 (10.0%)	9 (30.0%)	7 (25.9%)
27	19 (16.1%)	6 (19.4%)	8 (26.7%)	3 (10.0%)	2 (7.4%)
28	8 (6.8%)	-	6 (20.0%)	1 (3.3%)	1 (3.7%)
29	3 (2.5%)	1 (3.2%)	-	1 (3.3%)	1 (3.7%)
30	3 (2.5%)	2 (6.5%)	-	-	1 (3.7%)
32	1 (.8%)	1 (3.2%)	-	-	-
34	1 (.8%)	-	1 (3.3%)	-	-
37	1 (.8%)	-	-	1 (3.3%)	-
38	1 (.8%)	-	-	-	1 (3.7%)

The issue of classes containing pupils from the Traveller community or those with special educational needs

As mentioned several times in this paper, the fact that pupils from the Traveller community and those with special educational needs are not counted in the calculation of class totals presents a challenge in describing whether class size targets have been met by schools participating in DEIS. A particular complication derives from the fact that the percentage of pupils from the Traveller community enrolled in the school was used as an indicator of disadvantage in the identification process (Archer & Sofroniou, 2008). Thus, because the percentage of pupils from the Traveller community in the school was one of the selection indicators for DEIS, schools with children from the Traveller community enrolled had an

advantage over those that did not in the selection process. A further issue is that it is likely that an increasing emphasis on inclusion in recent years has led to a higher number of pupils with special educational needs being included in mainstream classes. Excluding these pupils from the current analyses may, therefore, slightly obscure comparisons of the positive discrimination achieved by the current DEIS scheme and that achieved by previous schemes, such as GCEB.

To investigate the impact of the non-inclusion of pupils from the Traveller community and those with special educational needs in the data presented here, two further analyses were conducted to assess the magnitude of the impact of their exclusion. First, the average size of junior classes in Band 1 schools *including pupils from the Traveller community and those with special educational needs* was computed (Table 16). Second, the percentage of junior single grade classes in Band 1 schools with 20 or fewer pupils was calculated (Table 17). (It should be noted that Tables 1 and 2 contain directly comparable information, but with pupils in these categories *excluded*).

Table 16. Average class size of urban, single grade, junior classes, and minimum and maximum values, in **DEIS Band 1** schools, in 2009/2010, including pupils from the Traveller community and those with special educational needs.

DEIS Status	N	Average (SD)	Min	Max
Band 1	1,147	18.4 (3.75)	6	41 ⁴

The effect of including pupils from the Traveller community and those with special educational needs on the junior class size totals for Band 1 is to increase the average class size by 1 pupil from 17.4 to 18.4⁵ (Tables 1 & 16). The inclusion of pupils from the Traveller community and those with special educational needs in various class size

⁴ This anomalous value was discussed earlier in relation to the data in Table 6. The information was checked and found to be that reported by the school (i.e., the school reported a total of 41 pupils, comprised of 38 ordinary class pupils and three pupils from the Traveller community).

⁵ Further analysis of data revealed a similar, but marginally smaller, increase in junior class size in Band 2, where junior class sizes increased from an average of 21.9 to 22.8 following the inclusion of pupils from the Traveller community and those with special educational needs.

categories in Table 17 reduces the percentage of junior classes that met the target for Band 1 schools of 20 or fewer pupils to 71.9% (from 79.3%, see Table 2). However, the inclusion of these pupils reveals a pattern of targeting class size reductions at the very junior end of the school, with fewer classes achieving the Band 1 target of 20 or fewer pupils as grade level increases. Even so, it is worth pointing out that even with pupils from the Traveller community and those with special educational needs included in the class totals, more than three-quarters of all junior infant classes contained 20 or fewer pupils.

Table 17. The number and percentage of junior single grade classes in urban **DEIS Band 1** schools that had 20 or fewer pupils, 21-24 pupils, 25-29 pupils or 30 or more pupils in 2009/2010, including children from the Traveller community and those with special educational needs.

Number in Class	All Junior Classes (n=1,147)	Junior Infants (n=299)	Senior Infants (n=300)	First Class (n=288)	Second Class (n=260)
≤ 20	825 (71.9%)	230 (76.9%)	223 (74.3%)	203 (70.5%)	169 (65.0%)
21-24	271 (23.6%)	60 (20.1%)	71 (23.7%)	75 (26.0%)	65 (25.0%)
25-29	49 (4.3%)	8 (2.7%)	6 (2.0%)	10 (3.5%)	25 (9.6%)
≥ 30	2 (0.2%)	1 (0.3%)	-	-	1 (0.4%)

Summary and Conclusion

The paper set out to examine the extent to which planned class size reductions to maximum sizes of 20 in junior classes and 24 in senior classes were achieved in schools participating in Band 1 of the urban dimension of DEIS. Table 18 presents a summary of the more pertinent statistics reviewed above. The analyses revealed that class size targets were achieved for the vast majority of junior and senior classes in DEIS Band 1 schools. Junior classes had an average class size of 17.43 ($SD=3.78$), with 79.3% of classes having 20 or fewer pupils. The inclusion of pupils from the Traveller community and those with special educational needs in the class size totals increased the average size of junior classes by one pupil. However, even with these pupils included, the vast majority of classes in Band 1 still achieved the target of

20 or fewer pupils. Senior classes had an average class size of 19.42 ($SD=4.42$), with 86.8% of classes having 24 or fewer pupils. Indeed, class size targets were not only met, but were greatly exceeded in a large number of cases. For example, more than a quarter of classes ($n=241$) that met the junior class size target of 20 or fewer contained fewer than 15 pupils. Clear evidence of positive discrimination towards Band 1, and to a large extent Band 2, schools was found in the comparison of junior and senior class sizes of DEIS Band 1, DEIS Band 2, and non-DEIS schools. For example, the percentage of junior classes with 20 or fewer pupils of 79.3% in Band 1 schools compared with 43.6% in Band 2 schools and 8.9% in non-DEIS schools. In addition, 2.6% of Band 1 classes, 32.7% of Band 2 classes and 71.7% of non-DEIS classes had 25 or more pupils. At senior grade levels, the percentage of classes with 24 or fewer pupils was 86.8% in Band 1, 51.7% in Band 2 and 22.7% in non-DEIS classes. In contrast, 0.8% of Band 1 classes, 10.3% of Band 2 classes and 28.6% of non-DEIS classes had 30 or more pupils. It would seem that in the year 2009/2010, the policy of positive discrimination in the form of class size reductions, promoted under the DEIS initiative, had largely been implemented in urban Band 1 schools, and class size for the majority of junior and senior classes in Band 1 schools had been reduced to meet specified targets. Small class sizes (relative to non-DEIS schools) were also observed in schools in Band 2.

Table 18. Summary table including pertinent class size information for urban, single grade classes according to DEIS status in 2009/2010.

	Average Class Size Junior (SD)	Average Class Size Senior (SD)	% Junior Classes with ≤ 20	% Junior Classes with ≥ 25	% Senior Classes with ≤ 24	% Senior Classes with ≥ 30
All Classes	23.85 (5.43)	25.24 (5.06)	28.6%	51.7%	38.7%	20.9%
Band 1 Classes	17.43 (3.78)	19.42 (4.42)	79.3%	2.6%	86.8%	.8%
Band 2 Classes	21.93 (4.76)	24.16 (4.33)	43.6%	32.7%	51.7%	10.3%
Non-DEIS Classes	26.35 (3.93)	27.08 (3.92)	8.9%	71.7%	22.7%	28.6%

The findings are similar to those found in the analyses of class size in schools in GCEB (Weir et al., 2007). In DEIS, a somewhat greater percentage (79.3%) of classes than in GCEB (73.7%) had successfully achieved the target of 20 pupils or fewer per class at junior level.

There was evidence of positive discrimination in both schemes, and very tentative evidence of slightly more positive discrimination in DEIS than in GCEB. Specifically, in GCEB junior classes contained an average of 18.2 pupils compared with an average of 26.6 among non-participants (a difference of 8.4 pupils). In Band 1 DEIS schools, junior classes contained an average of 17.4 pupils, compared with 26.35 among non-participants (a difference of 8.95). The extent of positive discrimination towards schools participating in GCEB in terms of the size of their senior classes was not examined by Weir et al. (2007), although participating schools were given preferential staffing allocations of 29:1 at senior level when the programme began in 2001, and this was further reduced to 27:1 in 2002. It is clear, however, from an examination of class size data at senior level in DEIS schools, that positive discrimination towards participating schools has been achieved. Among Band 1 schools, almost 9 in every 10 classes (86.8%) have met the target of 24 pupils or fewer, compared with less than a quarter of non-DEIS schools (22.7%). Although not a provision of the programme, class size in Band 2 DEIS schools also compares favourably with non-participating schools, with just over half (51.7%) of senior classes in Band 2 containing 24 or fewer pupils. The examination of class size based on previous participation in initiatives aimed at addressing disadvantage revealed a bias in favour of participants in such schemes over non-participants. This conferred a class size advantage on those schools in both DEIS Bands that had participated in previous schemes, and that advantage was found among both junior and senior classes in the data for 2009/2010.

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