

**Analysis of school attendance
data at primary and post-
primary levels for 2003/2004**

**Report
to the
National Educational Welfare Board**

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INTRODUCTION

The purpose of this report is to summarise attendance data submitted by schools to the National Educational Welfare Board (NEWB) at the end of the 2003/2004 school year. The report is in two parts, the first concerning post-primary schools, and the second, primary schools. (While data were collected from special schools, the data were not analysed for this report). An important focus of the current exercise is on relating schools' data on attendance to other educational and socioeconomic characteristics. Data for this aspect of the analysis at post-primary level were extracted from a database prepared for the 16:1 Initiative in 2002, while data for the equivalent primary-level analysis were extracted from a database used to select schools for resource allocation under Giving Children an Even break (GCEB) in 2000. More information on the 16:1 Initiative and GCEB, and the associated systems of ranking schools, is available in Appendices 1 & 2.

PART 1. POST-PRIMARY SCHOOLS

RESPONSE RATES

Overall response rate

Of a total of 742 post-primary schools in 2004, 527 (71%) returned attendance data for the 2003/2004 school year. Of these, 506 (96%) schools returned data on or after June 1st, 15 (2.8%) returned data before June 1st (i.e., prior to the end of the school year, and thus, before attendance data could be accurately completed), and the returns from 6 schools (0.8%) were not dated. Of the total number of schools that responded, 490 (93%) returned surveys by post, while the remaining 37 schools (7%) completed the online version of the survey.

Response rate by sector and size

The remainder of this section is concerned with comparing schools that responded with those that did not on a number of characteristics. Substantial differences between respondents and non-respondents would, of course, cast doubt on the generalisability of the findings on attendance. Table 1 shows the breakdown of responses according to school sector. Community and Comprehensive schools have been combined into one category.

Table 1. Numbers and percentages of Secondary, Vocational, and Community /Comprehensive schools that returned and did not return attendance surveys.

Sector	Returned (N=527)		Did not return (N=215)	
	Number	%	Number	%
Secondary (N=406)	308	75.9%	98	24.1%
Vocational (N=246)	158	64.2%	88	35.8%
Community/ Comprehensive (N=90)	61	67.8%	29	32.2%
All (N=742)	527	71.0%	215	29.0%

As Table 1 shows, the average response rate across all sectors was 71%, while return rates by sector ranged from 64.2% for Vocational schools to 75.9% for Secondary schools, with Vocational schools having the lowest response rate. Chi-square analysis revealed that the difference in response rates across different sectors was significant ($\chi^2=10.6;df=2;p=.005$). The comparatively low response rate from Vocational schools merits further attention. Because Vocational schools tend to be smaller than schools in other sectors, data from 2001/2002 on schools' total enrolment were used to compare responders and non-responders in terms of size. Schools were divided into three equal-sized groups (entitled "small", "medium" and "large" for comparison purposes) on the basis of their total enrolment in 2001/2002 (Table 2). A Chi-square test revealed that there were no significant differences between schools that responded and those that did not on the basis of size ($\chi^2=1.9;df=2;ns$). Bearing in mind that the enrolment data used in the analysis do not relate to the same year as the attendance data, it appears that school size did not impact on response rates, and does not explain the lower response rate of Vocational schools.

Table 2. Numbers and percentages of small, medium, and large schools that returned and did not return attendance surveys.

Size	Returned (N=513)		Did not return (N=194)	
	Number	%	Number	%
Small (< 335) (N=235)	176	74.9%	59	25.1%
Medium (336-543) (N=234)	172	73.5%	62	26.5%
Large (544-1,559) (N=238)	165	69.3%	73	30.7%
All (N=707)	513	72.6%	194	27.4%

To examine whether schools in the Vocational sector that returned and did not return data differed in their socioeconomic composition, they were compared on the percentage of students that were medical card holders using data from the 16:1 database. A *t*-test revealed that there was no significant difference between returners and non-returners in their average percentage of medical cards (Table 3).

Table 3. Percentage of medical cards in Vocational schools that returned and did not return attendance data to the NEWB.

	% medical cards	<i>SD</i>	<i>t</i>	<i>p</i>
Returned (N=149)	40.66%	15.2	-.006	<i>ns</i>
Did not return (N=69)	40.67%	17.5		
All (N=218)	40.66%	15.9		

Response rate by socioeconomic and educational characteristics

Data from the 16:1 database (see Appendix 1) were used to compare schools that responded and those that did not on percentage medical card possession, percentage retention rate to Junior Certificate, and average performance on the Junior Certificate Examination (Table 4). As Table 4 shows, there were no significant differences between schools that responded and those that did not on these characteristics which were used to rank order schools on levels of disadvantage in the 16:1 initiative.

Table 4. Mean values on variables from the 16:1 database for schools that returned and did not return data to the NEWB¹.

	Returned	Did not return	
Variable	Mean (SD)	Mean (SD)	Difference (t,df,p)
Percentage medical cards (averaged for 2000 & 2001)	29.5% (16.6)	30.0% (18.3)	<i>t</i> =-0.37; <i>df</i> =705; <i>ns</i>
Percentage retention to JCE (for cohorts entering post-primary in 1992, 1993 & 1994)	92.9% (7.0)	92.7% (7.4)	<i>t</i> =0.31; <i>df</i> =705; <i>ns</i>
Average performance in the JCE (2000 & 2001 cohorts)	59.4 (7.2)	59.0 (7.6)	<i>t</i> =0.65.; <i>df</i> =707; <i>ns</i>

¹This table repeats for all schools and all three variables the exercise that was done with medical cards only for Vocational schools in Table 3.

Response rate by membership of schemes to address disadvantage

Tables 5 and 6 respectively show returners and non-returners by membership of the Designated Areas Scheme (DAS) and the School Completion Programme (SCP), both of which are aimed at addressing disadvantage. As the tables show, about three-quarters of schools in each scheme returned attendance data. A Chi-square test failed to find any significant differences in responses rates between the percentages of schools participating in the DAS ($\chi^2=.23;df=1;ns$) and the SCP ($\chi^2=.00;df=1;ns$) and non-participants in these schemes. The fact that response rates from schools in the DAS and the SCP do not differ much from the overall response rate of 71% suggests, as does Table 4 above, that the sample of schools that responded are not characterised by particularly high or low levels of disadvantage, and there is no evidence that they are unrepresentative of schools in the population as a whole.

Table 5. Number and percentage of schools in the Designated Areas Scheme (DAS) that returned and did not return attendance surveys.

	Total N=742			
	Returned (N=527)		Did not return (N=215)	
Scheme	Number	%	Number	%
In DAS (N=206)	149	72.3%	57	27.7%
Not in DAS (N=536)	378	70.5%	158	29.5%

Table 6. Number and percentage of schools in the School Completion Programme (SCP) that returned and did not return attendance surveys.

	Total N=707*			
	Returned (N=513)		Did not return (N=194)	
Scheme	Number	%	Number	%
In SCP (N=103)	75	72.8%	28	27.2%
Not in SCP (N=604)	438	72.5%	166	27.5%

*Data on membership of SCP are only available for the 707 schools in the population that also had data for the 16:1 Initiative.

Response rates by location in RAPID areas

Another way of examining disadvantage in a school is by establishing whether a school is in a RAPID area or not. Information on schools' location in RAPID areas was available for post-primary schools that had featured in the 16:1 database. Therefore, it was possible to divide schools into those located in RAPID 1 areas

(cities), RAPID 2 areas (large towns), and schools in neither. Table 7 shows the breakdown of returners and non-returners according to this classification. Results of a Chi-square test confirmed that there were no differences in the percentage of schools that responded from within the three RAPID classifications ($\chi^2=.82;df=2;ns$). Furthermore, the response rates according to RAPID classification are not dissimilar to the overall response rate of 71% across all schools.

Table 7. Number and percentage of schools in RAPID 1 and 2 and not in RAPID that returned and did not return attendance surveys.

	Total $N=707^*$			
	Returned ($N=513$)		Did not return ($N=194$)	
RAPID area	Number	%	Number	%
RAPID 1 ($N=46$)	36	78.3%	10	21.7%
RAPID 2 ($N=81$)	59	72.8%	22	27.2%
Not in RAPID ($N=580$)	418	72.1%	162	27.9%

*Data on location in RAPID areas are only available for the 707 schools in the population that also had data for the 16:1 Initiative.

Response rates on individual survey items

Table 8 shows response rates and descriptive statistics on attendance variables for all schools that returned data. The values in Table 8 represent values prior to data cleaning (i.e., before the removal of significant outliers from the dataset).

Table 8. Response rates and descriptive statistics on individual items among schools that returned data ($N=527$).

	Variable				
	Total enrolment 2003/2004	Total no. days absent (all students)	Number of students absent 20 days or more	Number of students expelled	Code of conduct available to parents (Y/N)
No. and % of responses	519 (98.5%)	415 (78.7%)	523 (99.2%)	521 (98.9%)	519 (98.5%)
% missing	—	108 (20.5%)	1 (0.2%)	6 (1.1%)	8 (1.5%)
% uninterpretable	8 (1.5%)	4 (0.8%)	3 (0.6%)	—	—
Mean	443.9	5,583.1	76.86	0.11	N.A.
<i>SD</i>	336.0	4,668.8	68.9	0.55	N.A.
Minimum	25	0	0	0	N.A.
Maximum	6,217	64,295	630	9	N.A.

The first step in the data cleaning exercise was to produce frequency distributions of responses for each of the 5 variables in schools' returns. A frequency distribution is a large table in which the number of occurrences of a value in a set of data are shown, and in which values are arranged in order of magnitude. This facilitated the identification of extreme or outlying values (relative to expected or known characteristics of schools) with a view to replacing them with missing values. As Table 8 shows, the maximum value on total enrolment given by any school was 6,217. According to the Department of Education and Science's database in 2003 (the most recent year for which data are available), the largest post-primary school had 2,659 students, and only 16 schools had enrolments greater than 1,000. On this basis, the school with 6,217 students had its enrolment value changed to "missing", and the remaining 8 schools with enrolments in excess of 1,000 were left unaltered. The minimum enrolment value of 25 in Table 8 is in line with values in the Department of Education and Science's database for 2003, and schools with enrolments of this magnitude were left unchanged. Data that are coded as "uninterpretable" are coded in this way either because principals indicated that their figures related to subgroups of students (e.g., only students 16 years old or less), or because the value was illegible or had been crossed out.

Item 2, which required principals to sum all absences for individual students over the school year, was the subject of much confusion among respondents. The high percentage of missing responses on this item (over 20%) probably reflects the difficulty associated with its completion. However, there was also evidence of misinterpretation among some of those that completed it. An examination of the frequency distribution for this variable showed that nine schools gave values of zero, while also having values greater than zero on the item concerning the total number of students absent for 20 days or more. This suggests that principals interpreted the item as referring to days on which *all* students in the school were marked absent¹. A further 11 schools gave values between 1 and 6 for this item, often accompanied by notes explaining why the school was closed (e.g., for inservice training). These schools also had values greater than zero for item 3 (the number of students absent for 20 days or more). A further 4 schools gave values of 167 or 168 (and another gave 198), suggesting that they

¹ The wording of this item may have encouraged this interpretation, as it read "Total number of days on which all students have been marked absent"

interpreted the item as meaning the total number of days in the school year. One further school appeared to reverse their responses for items 2 and 3. Finally, in one school, a value of 64,295 days absent meant that the 398 students enrolled would have been absent for an average of 161.5 days each. In all of the above cases of misinterpretation, the original value provided by the school was changed to “missing”. For item 3, three principals gave figures for number of students absent for 20 days or more which exceeded the total enrolment. These values were also changed to missing. It is important to note that, while data cleaning removes some of the most obvious errors, it does not identify all errors. The approach adopted for the current exercise focused on removing scores that were judged to lie outside the expected range. However, there could be scores that are within the expected range that are incorrect. In addition, it is very unlikely that schools that answered items in relation to a subgroup but did not state that they were doing so would have been identified in the data cleaning process. Revised response rates and descriptive statistics on the five variables following data cleaning are shown in Table 9.

It is important to note that, while the data are assumed to have an acceptable degree of validity for research purposes (i.e., for exploring the relationships between variables), if used for the identification of individual schools, the data require checking on a case-by-case basis due to questions about the validity of responses to individual items.

Table 9. Response rates and descriptive statistics, following data cleaning, on individual items for schools that returned data ($N=527$).

	Variable				
	Total enrolment 2003/2004	Total no. days absent (all students)	Number of students absent 20 days or more	Number of students expelled	Code of conduct available to parents (Y/N)
No. and % of responses	518 (98.3%)	388 (73.6%)	520 (98.7%)	521 (98.9%)	519 (98.5%)
% missing	1 (0.2%)	135 (25.6%)	4 (0.8%)	6 (1.1%)	8 (1.5%)
% uninterpretable	8 (1.5%)	4 (0.8%)	3 (0.6%)	—	—
Mean	432.7	5,803.4	74.3	0.11	N.A.
<i>SD</i>	220.3	3,506.5	60.0	0.55	N.A.
Minimum	25	440	0	0	N.A.
Maximum	1,224	20,622	393	9	N.A.

The computation of additional variables from data provided by schools

The data provided by principals were used to compute an annual percentage attendance rate for each school. This was done by dividing the total number of student absences (Item 2) by the maximum number of student days in the school year. The latter was obtained by multiplying the schools' total enrolment (Item 1) by the number of days in the school year (the figure of 167 days was used). On the basis of these figures, percentage attendance rates varied from 99.66% in the school with the highest attendance level to 57.9% in the school with the lowest (Table 10). The percentage of students absent for 20 days or more was also computed. This was done by dividing the number of students absent for 20 days or more (Item 3) by the total enrolment (Item 1) and multiplying the outcome by 100. In one school, however, the number of students absent for 20 days or more exceeded the total enrolment, giving a value of 209% as the percentage of students who missed 20 days or more. This value was changed to "missing" as part of a second stage of data cleaning (the first stage concerned the raw data submitted by principals, while the second stage concerned the removal of errors which only became apparent when the raw data were used to compute percentages). Descriptive statistics on the two derived variables are given in Table 10².

Table 10. Response rates and descriptive statistics, following data cleaning, on derived variables among schools that returned data ($N=527$).

	Variable	
	Annual percentage attendance 2003/2004	Percentage of students absent for 20 days or more
No. and % of schools	383 (72.7%)	512 (97.1%)
% missing	144 (27.3%)	15 (2.9%)
Mean	91.3%	18.9%
<i>SD</i>	4.1	13.4
Minimum	57.9%	0%
Maximum	99.66%	87.5%

Among schools that have data for both variables ($N=379$), there is a high and statistically significant correlation between the annual percentage attendance rate and

² Two separate lists of schools, showing schools ordered by annual percentage attendance and by the percentage of students absent for 20 days or more, have been produced as a supplement to this report.

the percentage of students that were absent for 20 days or more in the 2003/2004 school year ($r = -.854; p < .001$).

A DESCRIPTION OF SCHOOLS THAT RETURNED DATA

Means on all attendance variables, are presented overall and by sector in Table 11. As the table shows, average enrolment appeared to differ depending on school sector. This was confirmed by the results of a one-way analysis of variance (ANOVA) which revealed an overall difference between the means of the three groups ($F = 32.3; df = 2; 515; p < .001$). Post-hoc tests (Least Significant Difference) also revealed that enrolments across all three sectors differed significantly from each other.

A one-way ANOVA showed that there was an overall difference according to sector in the total number of days students were absent from school ($F = 18.1; df = 2; 385; p < .001$). However, follow-up tests revealed that while Community/Comprehensive schools differed from Secondary and Vocational schools in the total number of student absences, the difference between Secondary and Vocational schools was not significant. The number of students absent for 20 days or more also differed significantly by sector ($F = 23.3; df = 2; 517; p < .001$), and follow-up tests showed that Secondary, Vocational, and Community/Comprehensive schools differed significantly from each other in their numbers of such students. Because these two comparisons include total numbers, and because schools in the three sectors tend to differ from each other in terms of size, comparisons of percentages are of interest.

Schools' annual percentage attendance rate was also found to differ across sectors ($F = 19.1; df = 2; 380; p < .001$). Post-hoc tests revealed that Secondary schools had a significantly higher average attendance rate (92.5%) than Community/Comprehensive schools (90.9%), which in turn had a significantly higher average rate than Vocational schools (89.8%). Significant overall differences between schools in the three sectors were also found for the percentage of students absent for 20 days or more ($F = 43.5; df = 2; 509; p < .001$). Secondary schools had the lowest average percentage of students absent for 20 days or more (14.7%), which was significantly lower than the figures for both Vocational (25.8%) and Community/Comprehensive (22.6%) schools. However, the differences between the percentages of such students in Vocational and Community/Comprehensive schools were not significant. Analysis revealed that

there were no cross-sectoral differences in the number of students expelled ($F=0.16;df=2;518;ns$). However, it should be noted that schools in all sectors had tiny values on this item, indicating that expulsion was a rarely-used sanction in schools in 2003/2004.

Table 11. Mean values on open-ended items¹ in the NEWB questionnaire, for schools overall, and by sector.

	Sector			
	Secondary	Vocational	Community/ Comprehensive	All
Variable	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Total enrolment 2003/04 (Item 1)	454 (205)	334 (207)	573 (224)	433 (220)
Total no. of days absent (Item 2)	5,473 (3,168)	5,279 (3,543)	8,346 (3,553)	5,803 (3,506)
No. of students absent 20 days or more (Item 3)	62.8 (51)	80.5 (66)	117.2 (63)	74.3 (60)
No. of students expelled (Item 4)	0.10 (0.42)	0.13 (0.78)	0.13 (0.39)	0.11 (0.55)
Annual percentage attendance (derived from Items 1 & 2)	92.5% (3.7)	89.8% (4.4)	90.9% (3.3)	91.3% (4.1)
% absent for 20 days or more (derived from Items 1 and 3)	14.7% (10.7)	25.8 (15.1)	22.5% (12.6)	18.9% (13.4)

¹It should be noted that the averages for items 2, 3 and 4 are average total numbers, and would therefore, be expected to vary with school size.

Virtually all schools indicated that they had a code of conduct available to parents (Table 12). A Chi-square test found no significant differences between the percentages of schools in different sectors that had such a code that was available to parents ($\chi^2=0.4;df=2;ns$).

Table 12. Mean percentage of schools overall, and by sector, that indicated that they had a code of conduct available to parents.

	Sector			
	Secondary	Vocational	Community/ Comprehensive	All
Variable	% yes	% yes	% yes	% yes
Code of conduct available to parents? (Item 5)	99.0%	98.1%	98.3%	98.7%

A similar set of analyses to those by sector were carried out for designated status. Table 13 shows schools' values on each attendance variable according to designated status, as well as the results of *t*-tests which were used to compare designated and non-designated schools on each variable. Analyses revealed that designated schools, while smaller than non-designated schools, have a significantly greater average total number of student absences and a significantly greater average number of students absent for 20 days or more than non-designated schools. The conversion of absolute numbers to percentages further clarifies the situation, and shows that designated schools had significantly lower average percentage attendance rates than non-designated schools, and significantly greater percentages of students absent for 20 days or more. The only variable on which designated and non-designated schools did not differ significantly was that relating to the number of expelled pupils. However, as was pointed out previously, only a tiny number of students were expelled in 2003/2004.

Table 13. Mean values on open-ended items¹ in the NEWB questionnaire, for designated and non-designated schools.

	Designated	Non-designated	
Variable	Mean (SD)	Mean (SD)	Difference (t;df;p)
Total enrolment 2003/04 (Item 1)	404 (191)	444 (230)	$t=-2.0;df=516;p<.05$
Total no. of days absent (Item 2)	6,460 (3,638)	5,523 (3,417)	$t=2.4;df=386;p<.05$
No. of students absent 20 days or more (Item 3)	94.1 (67)	66.5 (55)	$t=4.5;df=518;p<.001$
No. of students expelled (Item 4)	0.16 (0.55)	0.10 (0.55)	$t=1.2;df=519;ns$
Annual percentage attendance (derived from Items 1 & 2)	89.6% (5.0)	92.0% (3.4)	$t=-4.6;df=381;p<.001$
% absent for 20 days or more (derived from Items 1 and 3)	25.5% (15.3)	16.3% (11.5)	$t=6.5;df=510;p<.001$

¹It should be noted that the averages for items 2, 3 and 4 are average total numbers, and would therefore be expected to vary with school size.

Table 14 contains a similar set of analyses according to whether or not schools were participating in the School Completion Programme (SCP). For most variables, the outcomes mirrored those for designated / non-designated schools. For example, schools in the SCP had a significantly greater number of overall student absences, a

significantly greater number of students absent for 20 days or more, a significantly greater percentage of students absent for 20 days or more, and a significantly lower annual percentage attendance rate than schools not participating in the SCP. However, participants and non-participants did not differ significantly in total enrolment. Finally, although the numbers were small, schools in the SCP had a significantly higher average number of expulsions than those not participating (with schools expelling an average of 0.4 of a student versus 0.06 of a student respectively).

Table 14. Mean values on open-ended items¹ in the NEWB questionnaire, for schools participating and not participating in the SCP.

	In SCP	Not in SCP	
Variable	Mean (SD)	Mean (SD)	Difference (t,df,p)
Total enrolment 2003/04 (Item 1)	439 (198)	433 (224)	$t=0.2;df=502;ns$
Total no. of days absent (Item 2)	7,818 (4,081)	5,483 (3,232)	$t=5.2;df=374;p<.001$
No. of students absent 20 days or more (Item 3)	116.5 (78)	68.0 (53)	$t=5.2;df=504;p<.001$
No. of students expelled (Item 4)	0.4 (0.75)	0.06 (0.27)	$t=3.4;df=505;p<.001$
Annual percentage attendance (derived from Items 1 & 2)	88.5% (6.0)	91.8% (3.3)	$t=-4.3;df=369;p<.001$
% absent for 20 days or more (derived from Items 1 and 3)	29.3% (17.4)	17.2% (11.5)	$t=5.7;df=496;p<.001$

¹It should be noted that the averages for items 2, 3 and 4 are average total numbers, and would therefore, be expected to vary with school size.

Table 15 presents data on the attendance characteristics of schools located in RAPID 1 and RAPID 2 areas and those not located in RAPID. One-way ANOVAs revealed that schools in the three RAPID classifications did not differ significantly in terms of their average enrolments ($F=1.5;df=2;501;ns$), the total average number of student absences ($F=1.8;df=2;373;ns$), the average number of students absent for 20 days or more ($F=0.5;df=2;503;ns$), or the average number of students expelled ($F=2.4;df=2;504;ns$). However, there was an overall significant difference between schools in the three RAPID classifications on average percentage attendance ($F=9.6;df=2;368;p<.001$) and average percentage of students absent for 20 days or more ($F=5.6;df=2;495;p<.005$). Follow-up tests revealed that schools in RAPID 1 areas (i.e., cities) had significantly lower average percentage attendance rates than did

schools in RAPID 2 (i.e., large towns) or schools not located in RAPID areas. Also, there was no significant difference between the annual percentage attendance rates of schools in RAPID 2 and those not located in RAPID areas. This pattern was repeated in the data on the percentage of students absent for 20 days or more. That is, schools located in RAPID 1 areas had significantly greater percentages of such students than did schools in RAPID 2 areas or in those not located in RAPID areas. Again, there were no significant differences on this variable between schools in RAPID 2 and schools located outside RAPID areas.

Table 15. Mean values on open-ended items¹ in the NEWB questionnaire, for schools located in RAPID areas 1 and 2 and schools not located in RAPID.

	RAPID 1	RAPID 2	Not in RAPID
Variable	Mean (SD)	Mean (SD)	Mean (SD)
Total enrolment 2003/04 (Item 1)	395 (199)	473 (205)	433 (223)
Total no. of days absent (Item 2)	7,108 (4,483)	5,557 (2,649)	5,815 (3,498)
No. of students absent 20 days or more (Item 3)	85.1 (58)	73.9 (58)	74.4 (60)
No. of students expelled (Item 4)	0.23 (0.60)	0.05 (0.29)	0.09 (0.38)
Annual percentage attendance (derived from Items 1 & 2)	87.8% (7.4)	91.8% (3.8)	91.5% (3.6)
% absent for 20 days or more (derived from Items 1 and 3)	26.1% (17.6)	17.3% (13.4)	18.6% (12.6)

¹It should be noted that the averages for items 2, 3 and 4 are average total numbers, and would therefore, be expected to vary with school size.

RELATING ATTENDANCE DATA TO SOCIOECONOMIC AND EDUCATIONAL DATA FROM THE 16:1 DATABASE

Of the 527 post-primary schools that returned data to the NEWB, 513 (97.3%) also have data on the percentage of medical cards in the school, the percentage retention rate to Junior Certificate, and an expression of the schools' average achievement in the Junior Certificate Examination (see Appendix 1). Also, an index of disadvantage based on these three variables is available for each school. Table 16 contains correlations between the two derived attendance variables (computed from the data collected by the NEWB) and each of these four variables. All correlations in Table 16 are statistically significant. This indicates that all variables have either a positive or

negative association with each other, and that the two attendance variables are significantly related to both the socioeconomic and educational variables in the 16:1 database. The highest correlation involving the attendance variables is between schools' annual percentage attendance rate and the percentage of students absent 20 days or more ($r=-.854$; $p<.01$), indicating that schools with low annual percentage attendance rates tend to have greater percentages of students absent 20 days or more. Better annual percentage attendance rates are also associated with smaller percentages of medical cards ($r=-.529$; $p<.01$), better retention rates to Junior Certificate ($r=.454$; $p<.01$), and better average performance on the Junior Certificate Examination ($r=.553$; $p<.01$). Unsurprisingly, annual percentage attendance is also related to schools' total score on the 16:1 index of disadvantage ($r=.588$; $p<.01$), indicating that higher attendance levels are associated with lower percentages of students from disadvantaged backgrounds. Higher percentages of students absent for 20 days or more are associated with larger percentages of medical cards ($r=.544$; $p<.01$), poorer retention rates to Junior Certificate ($r=-.446$; $p<.01$), and poorer average performance on the Junior Certificate Examination ($r=-.547$; $p<.01$).

Table 16. Correlations for all schools between socioeconomic and educational variables in the 16:1 database and values on derived variables in the NEWB questionnaire relating to percentage attendance.

	Annual % attendance	% absent 20 days or more	16:1 score* on disadvantage	% medical cards	% retention to Junior Cert	Mean score in Junior Cert (OPS)
Annual % attendance	—	$-.854^{**}$ ($N=379$)	$.588^{**}$ ($N=371$)	$-.529^{**}$ ($N=371$)	$.454^{**}$ ($N=371$)	$.553^{**}$ ($N=371$)
% absent 20 days or more		—	$-.602^{**}$ ($N=498$)	$.544^{**}$ ($N=498$)	$-.446^{**}$ ($N=498$)	$-.547^{**}$ ($N=498$)
16:1 score on disadvantage			—	$-.918^{**}$ ($N=707$)	$.802^{**}$ ($N=707$)	$.853^{**}$ ($N=707$)
% medical cards				—	$-.559^{**}$ ($N=707$)	$-.647^{**}$ ($N=707$)
% retention to Junior Cert					—	$.683^{**}$ ($N=707$)
Mean score in Junior Cert (OPS)						—

*Scores ranged from -168 (most disadvantaged) to 61 (least disadvantaged).

** $p<.01$

A further illustration of the relationship between schools' annual percentage attendance rate, the percentage of students absent for 20 days or more, and overall level of disadvantage, is presented in Table 17. In the table, schools have been categorised into 10 bands, or deciles, according to their score on the 16:1 index, and the corresponding value on the attendance variables has been computed for each group. As the table shows, in general, the overall percentage attendance increases and the percentage of students absent for 20 days or more decreases as the level of disadvantage decreases.

Table 17. Average annual percentage attendance, and average percentage of students absent for 20 days or more, according to scores grouped by decile on the 16:1 index of disadvantage.

Decile	Mean annual percentage attendance	Mean percentage of students absent 20 days or more
1 st (most disadvantaged)	86.1% (N=38)	38.0% (N=43)
2 nd	89.0% (N=42)	27.1% (N=51)
3 rd	90.9% (N=38)	22.7% (N=38)
4 th	90.3% (N=38)	21.4% (N=38)
5 th	92.1% (N=43)	17.3% (N=55)
6 th	91.7% (N=42)	17.5% (N=54)
7 th	92.6% (N=34)	14.1% (N=49)
8 th	93.1% (N=31)	13.2% (N=45)
9 th	93.7% (N=28)	11.4% (N=52)
10 th (least disadvantaged)	94.6% (N=36)	8.5% (N=47)

PART 2. PRIMARY SCHOOLS

RESPONSE RATES

Overall response rate

At the beginning of Part 1, overall response rates and differences between schools that returned questionnaires and those that did not were examined. Misinterpretations of questions on the survey form were also described, as was data cleaning that was done to remove obvious outliers. Although several problems were identified, it was concluded that the data were good enough for purposes of presenting a general picture of overall attendance rates and the relationships between attendance and other variables.

Initially the data from primary schools seemed better than the data from post-primary schools. A higher percentage of primary schools (83%, compared to 71% at post-primary level) returned the questionnaire before analysis began on July 19th, and there was evidence that primary principals were less likely to misinterpret items 2 and 3 on the questionnaire than post-primary principals.

Response rate by size, location, and socio-economic composition of school

No significant differences were found when schools that returned were compared with those that did not on a series of variables contained on the GCEB database (size, % medical card possession, % receiving a grant for school books, overall GCEB points total³, location in an urban or rural area, location in a RAPID area, designated status) (see Tables 18 to 21).

Table 18. Average enrolment, percentage of medical cards, percentage of pupils for whom schools received a grant under the Free Books for Needy Pupils Grant Scheme, and GCEB points total in primary schools that returned and did not return attendance data to the NEWB.

Variable	Returned		Did not return		All		Diff. between returners & non-returners	
	Mean	SD	Mean	SD	Mean	SD	<i>t</i>	<i>p</i>
Enrolment (N=3,093)	135.2	125.7	135.6	124.9	135.3	125.5	-.07	<i>ns</i>
% medical cards (N=2,154)	39.1%	26.2	37.7%	26.5	38.9%	26.3	0.9	<i>ns</i>
% free books (N=2,815)	39.4%	26.0	37.7%	25.4	39.1%	25.9	1.3	<i>ns</i>
GCEB points (N=2,506)	190.4	160 .5	183.1	158.7	189.3	160.2	0.8	<i>ns</i>

Table 19. Numbers and percentages of primary schools that returned and did not return attendance surveys, according to location.

	Returned		Did not return	
	Number	%	Number	%
Urban (N=867)	742	85.6%	125	14.4%
Rural (N=1,660)	1,402	84.5%	258	15.5%
All (N=2,527)	2,144	84.8%	1,660	15.2%

³ For a fuller description of the Giving Children an Even Break programme and associated database, see Appendix 2.

Table 20. Number and percentage of primary schools in RAPID 1 and 2 and not in RAPID that returned and did not return attendance surveys.

RAPID area	Returned		Did not return	
	Number	%	Number	%
RAPID 1 (N=139)	121	87.1%	18	12.9%
RAPID 2 (N=95)	78	82.1%	17	17.9%
Not in RAPID (N=2,903)	2,400	82.7%	503	17.3%
All (N=3,137)	2,599	82.8%	538	17.2%

Table 21. Numbers and percentages of primary schools that returned and did not return attendance surveys, according to designated status.

	Returned		Did not return	
	Number	%	Number	%
Designated (N=307)	264	86.0%	43	14.0%
Not designated (N=2,830)	2,335	82.5%	495	17.5%
All (N=3,137)	2,601	82.8%	538	17.2%

As was the case at post-primary level, whether schools returned their questionnaires early (i.e., before June 24th at primary level⁴) or after that date was noted at the point of data entry. It was found that the incidence of schools returning the survey before the date on which it was understood that most primary schools closed for the summer holidays was quite high (18.3% compared to 2.8% at post-primary level). In light of this problem, the earlier returning schools were contacted again by the NEWB and asked to update their data. The vast majority of schools that were followed up in this way claimed that they had, indeed, submitted data for the entire year, and that the return date had appeared to be early because the schools had reserved their discretionary days holidays for use at the end of the school year. Because of this, as well as the fact that only a small minority of schools that were contacted were found to have submitted data based on an incomplete school year, it was decided to proceed with the analysis of the primary data on the basis that the problem was unlikely to lead to misleading outcomes in the overall analysis. However, several differences between schools that returned their data earlier and those that did not were noted. First, schools that returned earlier reported significantly better attendance rates than other schools. Second, the earlier returners were found to differ

⁴ Primary schools were requested to return their data by July 16th.

from other schools in a number of complex ways that are not easy to interpret. Thus, for example, small schools were more likely to be among the earlier returners than were larger schools, and rural schools were more likely to be so than urban schools. In addition, levels of disadvantage in earlier returning schools were higher than in other schools, although these differences are complicated by an interaction with whether the school is urban or rural. These issues, while worthy of further investigation, are outside the scope of the current report.

Response rates on individual items

Similar procedures to those used at post-primary level were used to remove outlying values on the five variables in the primary-level questionnaire. For example, 110 values on Item 2 (the variable concerning the total number of days on which pupils were absent) were changed to “missing”. This was done either because schools had provided values that were unrealistically low (involving 90 schools, including 28 schools that gave values of zero) indicating they had misinterpreted the item as meaning days when the school was closed, or because they were unrealistically high (involving 20 schools, some of which gave values indicating that all pupils were absent for every day of the school year). A further 18 schools’ responses were coded as “uninterpretable” on this item, because, for example, they indicated that their responses were based on a sub-group (e.g., 6-year olds and over).

Tables 22 and 23 show descriptive statistics on each variable prior to, and following, data cleaning. As Table 22 shows, the initial response rate on individual items among schools that responded was very high, ranging from a low of 98.0% for the variable concerning the total number of absent students, to 99.7% for that concerning the total enrolment in 2003/2004. Data cleaning inevitably reduced the response rate on individual items (with the exception of values on the variable concerned with the number of expulsions, which remained unaltered). The decline in response rates following cleaning was, however, much smaller at primary than at post-primary level. As was the case at post-primary level, the largest decline occurred in relation to the total number of days that pupils were absent, which went from a response rate of 98.0% before cleaning to 93.7% following cleaning.

Table 22. Response rates and descriptive statistics on individual items among primary schools that returned data⁵ ($N=2,601$).

	Variable				
	Total enrolment 2003/2004	Total no. days absent (all students)	Number of students absent 20 days or more	Number of students expelled	Code of conduct available to parents (Y/N)
No. and % of responses	2,594 (99.7%)	2,548 (98.0%)	2,585 (99.4%)	2,577 (99.1%)	2,589 (99.5%)
% missing	3 (0.1%)	35 (1.3%)	9 (0.3%)	23 (0.9%)	12 (0.5%)
% uninterpretable	4 (0.2%)	18 (0.7%)	7 (0.3%)	1 (0.0%)	—
Mean	142.14	1,578.86	16.93	0.0	N.A.
SD	167.5	2,409.8	28.5	0.06	N.A.
Minimum	3	0	0	0	N.A.
Maximum	5,220	75,858	776	1	N.A.

Table 23. Response rates and descriptive statistics, following data cleaning, on individual items for schools that returned data ($N=2,601$).

	Variable				
	Total enrolment 2003/2004	Total no. days absent (all students)	Number of students absent 20 days or more	Number of students expelled	Code of conduct available to parents (Y/N)
No. and % of responses	2,591 (99.6%)	2,438 (93.7%)	2,580 (99.2%)	2,577 (99.1%)	2,588 (99.5%)
% missing	6 (0.2%)	145 (5.6%)	14 (0.5%)	23 (0.9%)	13 (0.5%)
% uninterpretable	4 (0.2%)	18 (0.7%)	7 (0.3%)	1 (0.0%)	—
Mean	139.42	1,598.68	16.36	0.0	N.A.
SD	128.2	1,725.0	21.9	0.06	N.A.
Minimum	5	0	0	0	N.A.
Maximum	945	12,692	228	1	N.A.

The computation of additional variables from data provided by schools

The data provided by principals were used to compute an annual percentage attendance rate for each school. (The total number of days in the school year was assumed to be 183 for all schools). On this basis, percentage attendance rates varied from 100% in the school with

⁵ Data were returned from 2,601 schools up to July 19th. The response rate has increased since then to 95% of schools, but schools that returned data later than July 19th are not included here.

the highest attendance rate to 48.14% in the school with the lowest (Table 24). (Three schools with annual percentage attendance figures of below 45% had their values replaced with “missing”). As at post-primary level, the percentage of students absent for 20 days or more was computed by dividing the number of students absent for 20 days or more (Item 3) by the total enrolment (Item 1) to obtain a percentage (Table 24).

Table 24. Response rates and descriptive statistics, following data cleaning, on derived variables among schools that returned data ($N=2,601$).

	Variable	
	Annual percentage attendance 2003/2004	Percentage of students absent for 20 days or more
No. and % of schools	2,430 (93.4%)	2,572 (98.9%)
% missing	(6.6%)	(1.1%)
Mean	94.1%	10.7%
<i>SD</i>	2.6	9.1
Minimum	48.1%	0%
Maximum	100%	77.8%

A DESCRIPTION OF SCHOOLS THAT RETURNED DATA

Across all schools that returned data, principals indicated that only 10 pupils had been expelled, while only 6 schools (0.2%) indicated that they did not have a code of conduct available to parents. As Table 24 shows, the overall attendance level at primary level was relatively high at 94.1%, and about one in ten pupils overall was absent for 20 days or more in 2003/2004. As information on schools’ location was available for the majority of schools, overall attendance data were also analysed by location (Table 25). Rural schools had significantly better annual percentage attendance rates ($t=-16.3;df=1,998;p<.001$) and significantly lower percentages of pupils absent for 20 days or more ($t=15.4;df=2,115;p<.001$) than urban schools. Schools that are designated as disadvantaged had significantly lower annual attendance rates than non-designated schools ($t=-13.8;df=2,426;p<.001$), while schools in the urban dimension of the Breaking the Cycle scheme had lower attendance rates than other urban schools not participating in the scheme ($t=-6.0;df=675;p<.001$) (Tables 26 and 27). A similar pattern was observed for the percentage of pupils absent for 20 days or more. In non-designated schools, an average of less than 10% of pupils were absent for 20 days or more compared with 23% in designated schools ($t=18.9;df=2,568;p<.001$), while in urban schools participating in Breaking the

Cycle, 29% of pupils were absent for 20 days or more compared with 15% in other urban schools ($t=7.1;df=722;p<.001$). In contrast, as Table 28 shows, there were no attendance differences between rural schools participating in the rural dimension of Breaking the Cycle and rural non-participants in average annual percentage attendance rate ($t=-0.9;df=1,321;ns$) or in the average percentage of pupils absent for 20 days or more ($t=1.2;df=1,391;ns$)

Table 25. Average annual percentage attendance rate, and average percentage of pupils absent for 20 days or more, among schools that returned data to the NEWB, by location.

Variable	Urban ¹		Rural ²		Location unknown	
	Mean	SD	Mean	SD	Mean	SD
Annual % attendance	92.6% (N=677)	3.3	94.8% (N=1,323)	1.7	94.4% (N=430)	2.9
% of pupils absent 20 days or more	15.6% (N=724)	10.6	8.8% (N=1,393)	7.5	9.0% (N=455)	7.8

¹Urban schools are thus classified because they are located in areas of over 1,500 population

²Rural schools are thus classified because they are located in areas of 1,500 population or fewer

Table 26. Average annual percentage attendance rate, and average percentage of pupils absent for 20 days or more, among schools that returned data to the NEWB, by designated status.

Variable	Designated	Non-designated
	Mean & SD	Mean & SD
Annual % attendance	90.7% (4.2) (N=246)	94.5% (2.1) (N=2,182)
% of pupils absent 20 days or more	23.0% (11.3) (N=257)	9.4% (7.6) (N=2,313)

Table 27. Average annual percentage attendance rate, and average percentage of pupils absent for 20 days or more, among urban schools that returned data to the NEWB, by Breaking the Cycle status.

Variable	In BTC urban	Urban not in BTC
	Mean & SD	Mean & SD
Annual % attendance	89.6% (2.5) (N=25)	92.7% (3.2) (N=652)
% of pupils absent 20 days or more	29.0% (10.7) (N=28)	15.0% (10.2) (N=696)

Table 28. Average annual percentage attendance rate, and average percentage of pupils absent for 20 days or more, among rural schools that returned data to the NEWB, by Breaking the Cycle status.

	BTC rural	Rural non-BTC
Variable	Mean & <i>SD</i>	Mean & <i>SD</i>
Annual % attendance	94.6% (1.6) (<i>N</i> =99)	94.8% (1.7) (<i>N</i> =1,224)
% of pupils absent 20 days or more	9.8% (9.6) (<i>N</i> =106)	8.7% (7.3) (<i>N</i> =1,287)

Finally, attendance rates were examined by schools' location in a RAPID area. As Table 29 shows, attendance rates differ overall according to RAPID area, with schools in RAPID 1 having the lowest annual percentage attendance rates ($F=113.6; df=2; 2,427; p<.001$) and the highest percentage of pupils absent for 20 days or more ($F=159.6; df=2; 2,569; p<.001$). Follow-up *t*-tests indicated that, in the case of both variables, schools in RAPID 1 had poorer attendance rates than those in RAPID 2, which in turn had poorer rates than schools not located in RAPID areas.

Table 29. Average annual percentage attendance rate, and average percentage of pupils absent for 20 days or more, among schools that returned data to the NEWB, by location in a RAPID area.

	RAPID 1	RAPID 2	Not in RAPID
Variable	Mean & <i>SD</i>	Mean & <i>SD</i>	Mean & <i>SD</i>
Annual % attendance	90.8% (4.3) (<i>N</i> =112)	92.9% (2.6) (<i>N</i> =72)	94.3% (2.4) (<i>N</i> =2,244)
% of pupils absent 20 days or more	23.7% (9.9) (<i>N</i> =120)	15.2% (10.9) (<i>N</i> =75)	9.9% (8.4) (<i>N</i> =2,375)

RELATING ATTENDANCE DATA TO SOCIOECONOMIC AND EDUCATIONAL DATA FROM THE GIVING CHILDREN AN EVEN BREAK (GCEB) DATABASE

Of the 2,601 primary schools that returned data to the NEWB, 2,126 (81.7%) also have data from the survey of disadvantage conducted by the ERC in 2000 (see Appendix 2). This permitted the relationship between attendance data and data on socioeconomic characteristics of families served by schools to be examined (e.g., the relationship between pupil attendance and medical card possession). Table 30 consists of a correlation matrix in which the two derived attendance variables are related to the key socioeconomic variables in GCEB across all schools.

Table 30. Correlations for all schools between socioeconomic variables in the GCEB database and total GCEB points and values on derived variables in the NEWB questionnaire relating to percentage attendance.

	Annual % attend- ance	% absent 20 days or more	% free books	GCEB points total	% unemploy- ment	% farmers' allowance	% medical card	% local authority housing	% lone parents
Annual % attend- ance	—	-.752** (N=2,417)	-.288** (N=2,192)	-.420** (N=1,985)	-.306** (N=1,830)	.114** (N=1,274)	-.263** (N=1,710)	-.487** (N=1,702)	-.365** (N=1,839)
% absent 20 days or more		—	.351** (N=2,316)	.475** (N=2,099)	.373** (N=1,937)	-.062* (N=1,351)	.326** (N=1,805)	.547** (N=1,805)	.395** (N=1,949)
% free books			—	.800** (N=1,982)	.685** (N=1,845)	.426** (N=1,289)	.686** (N=1,728)	.546** (N=1,732)	.346** (N=1,857)
GCEB points total				—	.856** (N=1,958)	.519** (N=1,367)	.872** (N=1,828)	.766** (N=1,828)	.555** (N=1,975)
% unemploy- ment					—	.433** (N=1,344)	.776** (N=1,775)	.601** (N=1,795)	.450** (N=1,900)
% farmers' allowance						—	.459** (N=1,280)	-.024 (N=1,261)	-.077** (N=1,332)
% medical card							—	.610** (N=1,695)	.477** (N=1,780)
% local authority housing								—	.667** (N=1,798)
% lone parents									—

** $p > .01$; * $p > .05$

Predictably, there is a significant negative association between schools' annual percentage attendance rate and each of the socioeconomic indicators. In other words, as attendance levels rise, the percentages of families headed by unemployed breadwinners and lone parents, parents with medical cards, those living in local authority housing, and in receipt of Farmer's Allowance, decline. Schools' GCEB points total (made up of scores on these individual items) and the percentage of pupils for whom a book grant is received by the school, is similarly negatively related to attendance. In line with these findings, the percentage of pupils absent for 20 days or more is positively related to each of the socioeconomic variables (i.e., the greater the schools' percentage of pupils absent for 20 days or more, the higher schools' scores on each of the socioeconomic variables

and on total GCEB points). Correlation matrices were produced separately for urban and rural schools to investigate whether schools' location affects the strength of the interrelationships between variables (Tables 31 and 32 respectively).

Table 31. Correlations for all urban schools between socioeconomic variables in the GCEB database and values on derived variables in the NEWB questionnaire relating to percentage attendance.

	Annual % attend- ance	% absent 20 days or more	% free books	GCEB points total	% unemploy- ment	% farmers' allowance	% medical card	% local authority housing	% lone parents
Annual % attend- ance	—	-.811** (N=670)	-.472** (N=638)	-.498** (N=670)	-.457** (N=625)	.041 (N=289)	-.430** (N=589)	-.455** (N=614)	-.320** (N=636)
% absent 20 days or more		—	.606** (N=684)	.642** (N=717)	.586** (N=667)	-.028 (N=313)	.587** (N=627)	.626** (N=654)	.451** (N=679)
% free books			—	.858** (N=702)	.765** (N=658)	.097 (N=312)	.795** (N=625)	.795** (N=647)	.622** (N=671)
GCEB points total				—	.904** (N=682)	.018 (N=324)	.930** (N=643)	.939** (N=670)	.768** (N=697)
% unemploy- ment					—	.099 (N=321)	.826** (N=630)	.816** (N=660)	.696** (N=675)
% farmers' allowance						—	.103 (N=303)	.011 (N=319)	.117* (N=323)
% medical card							—	.863** (N=630)	.721** (N=640)
% local authority housing								—	.720** (N=667)
% lone parents									—

** $p > .01$; * $p > .05$

The majority of relationships between attendance variables and variables from the GCEB database are stronger in urban schools than in schools overall. An exception arises in relation to Farmers' Allowance, which is not an appropriate indicator in urban schools. As was the case with urban schools, all correlations are significant and in the expected direction in rural schools (i.e., attendance problems are associated with increasing numbers of pupils from poor backgrounds), with the surprising exception of the variable

relating to Farmers' Allowance. In most cases, however, the magnitude of the correlations in urban schools greatly exceed those in rural schools. For example, the correlation between total points on the GCEB index and annual percentage attendance is -.131 in rural schools compared to -.498 in urban schools, while the correlation between medical card possession and the percentage of pupils absent for 20 days or more is .149 in rural schools compared with .587 in urban schools.

Table 32. Correlations for all rural schools between socioeconomic variables in the GCEB database and values on derived variables in the NEWB questionnaire relating to percentage attendance.

	Annual % attend- ance	% absent 20 days or more	% free books	GCEB points total	% unemploy- ment	% farmers' allowance	% medical card	% local authority housing	% lone parents
Annual % attend- ance	—	-.747** (N=1,318)	-.131** (N=1,213)	-.161** (N=1,315)	-.175** (N=1,205)	.019 (N=985)	-.124** (N=1,121)	-.222** (N=1,088)	-.134** (N=1,203)
% absent 20 days or more		—	.143** (N=1,273)	.197** (N=1,382)	.222** (N=1,270)	.028 (N=1,038)	.149** (N=1,178)	.239** (N=1,151)	.123** (N=1,270)
% free books			—	.761** (N=1,280)	.635** (N=1,187)	.522** (N=977)	.617** (N=1,103)	.279** (N=1,085)	.060* (N=1,186)
GCEB points total				—	.867** (N=1,276)	.742** (N=1,043)	.893** (N=1,185)	.462** (N=1,158)	.208** (N=1,278)
% unemploy- ment					—	.512** (N=1,023)	.748** (N=1,145)	.506** (N=1,135)	.286** (N=1,225)
% farmers' allowance						—	.534** (N=977)	.125** (N=942)	.009 (N=1,009)
% medical card							—	.490** (N=1,065)	.338** (N=1,140)
% local authority housing								—	.415** (N=1,131)
% lone parents									—

** $p > .01$; * $p > .05$

Tables 33 and 34 further illustrate the relationship between schools' annual percentage attendance rate, the percentage of students absent for 20 days or more, and schools' overall level of disadvantage as expressed by total points in GCEB according

to schools' location. Table 33 shows urban schools categorised into 10 bands, or deciles, according to their score on the GCEB index, and their corresponding averages on the attendance variables. Table 34 shows the equivalent data for rural schools.

Table 33. Average annual percentage attendance, and average percentage of pupils absent for 20 days or more in urban schools, according to scores grouped by decile on the GCEB index of disadvantage.

Decile	Mean annual percentage attendance	Mean percentage of students absent 20 days or more
1 st (most disadvantaged)	89.6% (N=66)	28.7% (N=74)
2 nd	90.5% (N=70)	23.6% (N=73)
3 rd	92.0% (N=71)	19.6% (N=72)
4 th	91.2% (N=64)	19.1% (N=67)
5 th	92.2% (N=69)	16.4% (N=73)
6 th	93.5% (N=69)	12.1% (N=74)
7 th	93.8% (N=67)	10.3% (N=71)
8 th	93.9% (N=60)	10.9% (N=68)
9 th	94.4% (N=67)	7.6% (N=73)
10 th (least disadvantaged)	94.9% (N=67)	7.3% (N=72)

Table 34. Average annual percentage attendance, and average percentage of pupils absent for 20 days or more in rural schools, according to scores grouped by decile on the GCEB index of disadvantage.

Decile	Mean annual percentage attendance	Mean percentage of students absent 20 days or more
1 st (most disadvantaged)	94.3% (N=133)	11.3% (N=140)
2 nd	94.5% (N=132)	10.2% (N=140)
3 rd	94.6% (N=129)	9.6% (N=135)
4 th	94.4% (N=140)	10.0% (N=143)
5 th	94.7% (N=133)	8.9% (N=138)
6 th	94.7% (N=132)	8.7% (N=139)
7 th	94.9% (N=126)	7.6% (N=131)
8 th	95.0% (N=127)	8.1% (N=137)
9 th	95.2% (N=130)	6.7% (N=141)
10 th (least disadvantaged)	95.3% (N=133)	6.3% (N=138)

As Table 33 shows, annual percentage attendance tends to decrease, and the percentage of students absent for 20 days or more tends to increase, with rising levels of disadvantage in urban schools. While attendance also decreases with levels of disadvantage in rural schools, it does not do so uniformly and the decrease is much less marked. A comparison of the urban and rural tables shows that the difference between the values for annual percentage attendance in the most and least disadvantaged categories is much smaller in rural schools (only one percentage point) than in urban schools, where the difference extends to 5.3%. The urban/rural difference is even more pronounced in relation to the variable concerning the percentage of pupils absent for 20 days or more: the difference between schools in the most and least disadvantaged categories in their average percentage of such pupils is 5% in rural schools compared with 21.4% in urban schools.

Finally, the GCEB database also contained principals' reports of the percentages of low-scoring senior pupils in reading and numeracy (i.e., pupils judged to be two years behind in both areas). Although imperfect as a measure, it is the only available educational measure at primary level, and, therefore, it was used to explore the relationship between attendance and achievement in schools overall and by location (Table 35). As the correlations show, both schools' annual percentage attendance rate, and the percentage of pupils absent for 20 days or more, are strongly associated with achievement in reading and numeracy: as attendance levels decrease, the percentages of pupils with serious difficulties increases. However, while all correlations are statistically significant, the relationship between achievement and attendance is much stronger in urban than in rural schools.

Table 35. Correlations in urban, rural, and all schools, between educational variables in the GCEB database and values on derived attendance variables from the NEWB.

		Annual % attendance	% of pupils absent 20 days or more	% of pupils 2 years below average in reading	% of pupils 2 years below average in numeracy
Annual % attendance	All	—	-.752~**	-.283**	-.365**
	Urban	—	-.811**	-.396**	-.426**
	Rural	—	-.747**	-.115**	-.143**
% of pupils absent 20 days or more	All		—	.343**	.376**
	Urban		—	.508**	.478**
	Rural		—	.162**	.148**

** $p > .01$

SUMMARY OF MAIN FINDINGS

The initial part of this summary relates to the quality of the data provided by schools. First, there seems to have been considerable confusion among principals (particularly at post-primary level) in relation to Item 2 which referred to the total number of days absent for all students. Some very low values on this variable suggest that a proportion of principals interpreted it as referring to any days on which *all* students were marked absent (such as inservice days). Handwritten notes on questionnaires gave explicit indications that this was the case, often accompanied by supplementary information outlining the reason why no students were present. Other principals misread the item and gave the total number of days in the school year, while others gave the total enrolment multiplied by the number of days in the school year. Where such errors were identified during data cleaning, they were treated as missing values. However, this served to increase the already high percentage of missing values from about 20% to 25% at post-primary level, and from 2% to 6.3% at primary level, on what is one of the key items in the questionnaire. The high rate of missing values on this item also had a serious effect on the computation of schools' annual percentage attendance rate, and, as a result, it was not possible to compute this value for 27.3% of post-primary, and 6.6% of primary schools that submitted data.

Second, a serious issue arose in relation to the student reference group upon which principals' responses were based. Again, this issue was more problematic at post-primary than at primary level. Several post-primary principals indicated that they confined their responses to students aged 16 or under, or indicated that they did, or did not, include special cohorts such as PLC students, while others added notes to the effect that they did not distinguish between students of different ages in their returns. Analysis carried out last year by the ERC for the NEWB was taken to refer to 6 to 16 year-olds (as specified in the Education (Welfare) Act, 2000). However, this year there was no guidance in relation to the age of the reference group on the accompanying documentation sent to schools. This factor undermines the usefulness of the data, as there is uncertainty as to whether all principals reported comparable figures. Furthermore, the total enrolment figure provided by principals may not be an appropriate basis for assessing percentages of student absences if enrolment refers to all students but data on absences relate only to subgroups. The enrolment figure provided was used in the computation of both of the derived variables (the annual

percentage attendance rate and the percentage of students absent for 20 days or more). If there were inaccuracies in enrolment figures that were not picked up by data cleaning (e.g., if they related to subgroups), this will have had follow-on effects on the accuracy of both of the derived variables. For these reasons, any lists of schools that are produced using the data require checking on a case-by-case basis if they are to be used for purposes of targeting schools with poor attendance. Finally, a small percentage of post-primary schools completed returns before the end of the school year⁶ (2.8%), meaning that any absences after that period could not have been included. This factor may serve to inflate overall attendance levels. The incidence of primary schools returning data before the date on which it was understood that most schools closed for the summer holidays was much greater (amounting to 18.3%). However, follow-up enquiries by the NEWB concluded that most schools had, indeed, submitted data for the complete school year, but had taken their discretionary holidays at the end of the year. To avoid this problem, it is suggested that future surveys of annual attendance require schools to indicate on their return the date on which the school year ended.

Third, while a total of 71% of post-primary schools responded to the survey, there is a concern regarding the representativeness of the data. Proportionately fewer Vocational than Secondary or Community/Comprehensive schools returned data. However, a comparison of the Vocational schools that returned and did not return data revealed no differences between the two groups in their average percentage of medical card holders. Therefore, it does not appear to be the case that response rates from Vocational school were affected by degree of disadvantage. Further checks on the comparability of characteristics of responders and non-responders in the sample as a whole were carried out using other available data. This exercise failed to find any differences between responders and non-responders in terms of school size, percentage of medical card holders, percentage retention rate, average performance in the Junior Certificate Examination, schools' participation in the Disadvantaged Areas Scheme or the School Completion Programme, and whether or not the school was located in a RAPID area. The overall conclusion is that there is no basis for believing that the schools that returned data to the NEWB differed from those that did not.

⁶ A cut-off point of before June 1st was used to indicate “early” returns at post-primary level. Schools were required to return their data before June 30th.

However, it should be noted that comparisons of responders and non-responders were based on a limited number of related characteristics (largely correlates of disadvantage), and that schools may have differed in ways that it was not possible to examine. There was no evidence that data from primary schools was unrepresentative of schools in terms of size, location, or level of disadvantage.

The average percentage attendance rate for post-primary schools was 91.3% and the average percentage of students absent for 20 days or more was 18.9%. Primary schools had average rates of 94.1% and 10.7% for annual percentage attendance and the percentage of pupils absent for 20 days or more. The differences between post-primary and primary schools are statistically significant on both variables, with post-primary schools having significantly lower average annual percentage attendance rates ($\chi^2=3.9$; $df=1$; $p<.05$) and percentages of pupils absent for 20 days or more ($\chi^2=26.3$; $df=1$; $p<.001$) than primary schools. As this is a first attempt to estimate an average of schools' attendance/absence levels, there are no existing data with which the present findings can be compared. A review of research and official statistics on attendance in other countries was beyond the scope of the present report. However, there are some indications that the rates reported here are similar to those in England (<http://www.dfes.gov.uk/rsgateway/DB/SFR/s000434/sfr34-2003.pdf>)

It should be noted that, in general, there do not appear to be readily accessible bases for international comparisons.

Another goal of the analysis was to examine the relationship between attendance and other known characteristics of schools. Of particular interest was the relationship between attendance levels and various measures of disadvantage at both primary and post-primary levels. At post-primary level, the factors examined included membership of schemes, location in RAPID areas, school type, and the relationship between attendance and variables included in the 16:1 database relating to medical card possession, retention rates, and performance in the Junior Certificate Examination. At primary level, factors included schools' location, membership of schemes, location in RAPID areas, as well as the relationship between attendance and variables included in the GCEB database relating to medical card possession, unemployment, residence in local authority housing, lone-parent family status and percentages of low achieving pupils.

Analysis at post-primary level revealed that attendance levels varied by sector. Secondary schools had the highest average annual percentage attendance rate (92.5%), followed by Community/Comprehensive schools (90.9%) and Vocational schools (89.8%). A pattern consistent with this was observed for percentages of students absent for 20 days or more, with Secondary schools reporting the lowest percentage of such students (14.7%), followed by Community/Comprehensive schools (22.5%), and Vocational schools (25.8%). It should be noted that the data supplied by schools does not identify students who could be termed “chronic” poor attenders. For example, if the school year has 167 days and the overall annual attendance rate is 91.3% (see Table 11), the overall average number of days absent is 15 days per year. This figure is only 5 less than the 20 days or more category which is the subject of item 3 in the NEWB questionnaire. It would seem desirable to also collect data on the numbers and percentages of students with attendance records that are much poorer than the average if targeting by the NEWB is to be maximally effective. The data also revealed that virtually all schools (98.7%) stated that they had a code of conduct available to parents, and there were no cross-sectoral differences in relation to this variable. Students expulsions were extremely rare (an average of 0.1 students among the 7.5% of schools that indicated they had expelled at least one student), and expulsion rates did not differ by sector. Expulsions at primary level were even less common, with only 10 schools indicating that they had each expelled one pupil (0.4% of all schools), and all but 6 schools (0.2%) indicated that they had a code of conduct available to parents.

Analysis of attendance data by membership of schemes to address disadvantage at post-primary level showed that annual percentage attendance rates in schools participating in the Designated Areas Scheme (DAS) were lower (at 89.6%) than in non-participating schools (92.0%), while the percentage of students absent for 20 days or more was higher in designated (25.5%) than in non-designated schools (16.3%). Expulsion rates did not differ significantly by designated status. This pattern was more or less repeated when data were analysed according to participation in the School Completion Programme (SCP). Again, schools participating in the scheme had poorer annual attendance rates (88.5%) than non-participants (91.8%), and higher percentages of students absent for 20 days or more (29.3% and 17.2% respectively).

Schools in the SCP, however, expelled a significantly greater number of students than did non-participants in 2003/2004, although the numbers were tiny (0.4 of a student versus 0.06 of a student respectively). If anything, the attendance profile of schools participating in the SCP is slightly poorer than that of schools in the DAS. This may be a result of differences in selection methods for participation in both schemes. A presentation by the Educational Research Centre (ERC) to the Educational Disadvantage Committee (EDC) in early 2004 showed that, while both schemes aim to address disadvantage, the degree of overlap between schools in terms of membership of both schemes is quite low at 60%. (A written version of this presentation is currently being prepared).

The findings at primary level concerning the relationship between attendance and participation in schemes largely mirror those at post-primary level. Primary pupils attending designated and non-designated schools had average annual attendance rates of 90.7% and 94.5% respectively (compared with 89.6% and 92% at post-primary level). Furthermore, more than twice the percentage of pupils in designated than in non-designated schools was absent for 20 days or more. It was also found that primary pupils attending Breaking the Cycle urban schools (in which disadvantage is more concentrated) had poorer attendance levels than pupils enrolled in other designated schools. Interestingly, pupils attending schools participating in the rural dimension of Breaking the Cycle had attendance levels comparable with non-participating rural schools. An examination of attendance according to schools' location revealed significantly higher annual percentage attendance levels, and significantly lower percentages of pupils absent for 20 days or more, in rural than in urban schools.

Another approach to the identification of disadvantage is the area-based approach used in RAPID classification. Data from the 16:1 database on post-primary schools' location in RAPID 1 and RAPID 2 was used to compare schools located in RAPID areas with schools that were not. Analysis revealed that schools located in RAPID 1 (city) areas had lower annual percentage attendance rates and higher percentages of students absent for 20 days or more than schools located in RAPID 2 (towns) or schools located not included in RAPID. As RAPID 2 areas are designated on the basis of socioeconomic characteristics, the failure to find attendance differences

between schools in RAPID 2 and non-RAPID areas seems surprising. However, in the work conducted by the ERC for the 16:1 Initiative, all but a few schools in RAPID 1 were found to have high scores on the overall index of disadvantage, but this was not found for schools located in RAPID 2 areas. The findings in relation to RAPID would seem to indicate that, if the NEWB uses RAPID classification to select post-primary schools for special attention or for additional resources, the emphasis should be on targeting schools located in RAPID 1 rather than RAPID 2 areas. At primary level, schools in RAPID 1 were found to have significantly poorer attendance levels than those in RAPID 2, which, in turn, were found to have significantly poorer levels than those not located in RAPID areas. As at post-primary level, location in a RAPID 1 area could be used by the NEWB in the identification of schools at primary level, although, unlike at post-primary level, location in a RAPID 2 area might also be considered appropriate.

At post-primary level, the two derived attendance variables were correlated with each of the three variables (one socioeconomic and two educational) from the 16:1 database, as well as with the overall index of disadvantage based on all three. All variables were found to be significantly correlated with each other. The highest correlation involving attendance variables was that between the annual percentage attendance rate and the percentage of students absent for 20 days or more ($r = -.854$). This indicates a strong association between both variables, and means that as values on one variable increase, values on the other decrease. The relationship between the two is quite pronounced at the extreme ends of the disadvantage spectrum. For example, when schools are divided into 10 equal groups based on their overall 16:1 index of disadvantage, schools in the most disadvantaged group have an annual attendance rate of 86.1% compared with 94.6% in the least disadvantaged group, and have an average of 38% of students absent for 20 days or more compared with 8.5% in the least disadvantaged group. High correlations were observed between attendance variables and socioeconomic and educational variables. Medical card possession was significantly associated both with annual percentage attendance and the percentage of students absent for 20 days or more. This suggests that schools with larger numbers of students from poor backgrounds tend to have greater problems with attendance. However, the annual percentage attendance rate, and the percentage of students absent for 20 days or more, were both significantly correlated with retention

levels to Junior Certificate and average performance on the Junior Certificate Examination. This finding highlights the association between poor attendance and poor scholastic performance which has been noted in other studies, including in a forthcoming report on the survey of literacy in designated primary schools conducted by the ERC. Predictably, the overall 16:1 index of disadvantage was also highly related to both attendance variables.

At primary level, similar analyses revealed significant correlations between the two derived attendance variables and all of the socioeconomic variables in the GCEB database. In other words, in general, the poorer the attendance in a school, the higher the percentages of families characterised by the socioeconomic indicators used in GCEB such as unemployment, medical card possession, residence in local authority housing, and lone parent families. In view of the finding that attendance levels in rural schools were significantly better than in urban schools, it was decided to examine correlations between socioeconomic and attendance variables separately for urban and rural schools. This showed that the relationship between attendance and the socioeconomic indicators was much stronger in urban than in rural schools. While achievement, as estimated by school principals, was found to be significantly correlated with attendance overall (as attendance decreases, the number of poorly performing pupils increases), this relationship was also much stronger in urban than in rural schools. This finding, combined with the finding that the relationship between levels of disadvantage and attendance is weaker in rural than in urban schools, suggests that the characteristics or conditions of rural schools, or of the communities in which they are located, might serve to mitigate the effects of disadvantage.

CONCLUSIONS AND RECOMMENDATIONS

A few points about the construction and administration of the questionnaire should be made. First, limiting the number of questions in the attendance survey to five items was a positive feature and probably led to higher overall response rate. Second, the item relating to the total number of student absences should be reworded to make it clear that the information being sought concerns the sum of all individual student absences over the entire school year. This could be accompanied by a worked example for illustration purposes. Third, explanations of individual items (which appear separately from the items in the 2003/2004 questionnaire) should appear

beside the items themselves. Fourth, it is essential that the characteristics of the student group which is the subject of enquiry are specified in detail (e.g., whether the target group at post-primary level includes students over 16 years of age or PLC students, and at primary level includes pupils under 6 years old). Fifth, principals should be instructed not to complete the data until after the final day of the school year has passed so that all potential absences may be included. As part of their return, principals could be asked to indicate the date on which the school closed for the summer holidays as well as the date on which the questionnaire was completed. Also, if attendance data were to be collected via a questionnaire to schools in the future, it is recommended that questionnaires are sent in two separate postings to post-primary and primary schools. Finally, it would be worth considering the addition of a further item to the questionnaire aimed at identifying cases of chronic poor attendance. As the current threshold of 20 days or more (as specified in the Education (Welfare) Act) is relatively low, it will only identify schools that have high proportions of students absent for five days more than the average. It would clearly be useful from a targeting point of view to have some assessment of the proportion of very poor attenders, perhaps those students absent for 40 days or more. Consideration could also be given to including a question that would allow a distinction to be made between absences for which a legitimate excuse exists and those for which no excuse or explanation exists. Such a question might not be too difficult for principals to answer if they are, as required by the Education (Welfare) Act, 2000, Part III, Section 18, to record “where a student fails to so attend, the fact of his or her failure and the reasons for such failure”.

Because of the numerous difficulties inherent in the data, one would need to be very cautious about using information about individual schools (e.g., in the identification of schools with particular problems). However, the analyses conducted provide some evidence to confirm previous thinking on the nature of the relationship between attendance and school (or student) characteristics. Furthermore, the data could provide some basis for guiding the attention of the NEWB to certain types of schools. Specifically, attendance problems at post-primary level appear to be most severe in Vocational schools, which traditionally have tended to cater for larger numbers of students from disadvantaged backgrounds. The data have also provided support for the existence of a strong association between attendance problems and characteristics

associated with disadvantage at post-primary level, such as medical card possession, retention rates, and achievement in state examinations. At primary level, attendance is similarly associated with socioeconomic characteristics and achievement, but the association is stronger in urban than in rural settings. The association between attendance and these characteristics at both levels underscores the importance of attempting to increase attendance rates among the most vulnerable groups.

The present finding regarding the percentage of students absent for 20 days or more has implications for the implementation of legislation under the Education (Welfare) Act. Almost 19% of students at post-primary level and almost 11% of pupils at primary level fall into this category, which under Part III, Section 21 requires some action on the part of school principals and Education Welfare Officers.

In 2001/2002, there were 341,099 students enrolled in second level schools aided by the Department of Education and Science nationally⁷. If the percentage of students absent 20 days or more was 19% (as was found for 2003/2004), this would mean that the attendance patterns of 64,809 students would have required some action to be taken by education welfare officers, although they would only need to enforce it for those under the age of 16 (i.e., 37,077 students). However, this would result in a very heavy workload for each of the 63 welfare officers that have been appointed. Indeed, implementing this single aspect of the legislation would involve each welfare officer dealing with an average of 1,029 student cases (589 relating to those under 16) at post-primary level alone, and the additional cases at primary level would significantly increase this figure. Presumably the workload would become particularly problematic at a certain point in the school year (e.g., in the second or third terms), by which time students would have had the opportunity to accumulate 20 days absence. This is likely to compound matters for education welfare officers who would have few cases early in the year, but mounting numbers as the year progresses.

Further research using school level data can be of some benefit if the sorts of problems identified here have been removed. However, a true understanding of attendance problems will only be achieved by a close examination of patterns of absences within schools and over time. The extent to which absences have been explained to the satisfaction of the school authorities also needs to be examined.

⁷ Source: Department of Education and Science Statistical report 2001/2002, p.5.

APPENDIX 1

The 16:1 Initiative

Background

The 16:1 Initiative, which was announced by the Minister for Education and Science in 2002 but was not subsequently implemented, proposed the allocation of additional teachers to post-primary schools where disadvantage was most concentrated, and was envisaged as assisting students in early post-primary school who were experiencing literacy and numeracy difficulties. In late 2002, the Educational Research Centre, in co-operation with the Department of Education and Science, devised a procedure for the identification of schools for participation in the new initiative. Identification was guided by the wording of the Education (1998) Act in which educational disadvantage is defined as “the impediments to education arising from social or economic disadvantage”. Therefore, in the Act, educational disadvantage is considered to involve both the presence of poverty and the presence of low educational attainment or achievement. For this reason, schools were to be selected on the basis of a combination of educational and socioeconomic indicators.

Index used in the selection of schools

Specifically, schools were rank-ordered for consideration on the basis of the percentage of medical cards among the student population, schools’ retention rate to Junior Certificate, and schools’ average performance on the Junior Certificate Examination. Information on the percentage of medical card holders in the school, which was derived from the number of Examination fee exemptions (available only to medical card holders), was assigned double weighting as the only available socio-economic variable at school level. Average retention rate to Junior Certificate (for the cohorts who entered post-primary school in 1992, 1993 & 1994), and average student performance in the Junior Certificate Examination (for the years 2000 and 2001), both of which were assigned single weighting, were combined with the information on medical cards to rank-order schools. Average performance on the Junior Certificate Examination at school level was expressed using the OPS (Overall Performance

Scale) score adopted directly from that used by Kellaghan and Dwan (1995)⁸ in their analysis of the 1994 Junior Certificate results. The OPS score involves the allocation of numerical values to the alphabetical grades awarded to candidates, which when summed, produce an index of a candidate’s general scholastic achievement (Table 23). The OPS score is based on a student’s performance in the seven subjects in which he or she performed best. The maximum possible OPS score is 84 (which is achieved by a student who is awarded seven “A” grades on Higher Level papers), while the lowest possible OPS score is 0 (where a student fails to achieve at least a grade “F” on any of his/her best seven papers).

Table 23. Individual overall performance scale (OPS) scores corresponding to grade categories at each JCE examination level.

Higher	Ordinary	Foundation	OPS score
A			12
B			11
C			10
D	A		9
E	B		8
F	C		7
	D	A	6
	E	B	5
	F	C	4
		D	3
		E	2
		F	1

⁸ Kellaghan, T., & Dwan, B. (1995). *The 1994 Junior Certificate Examination: A review of results*. Dublin: National Council for Curriculum and Assessment.

APPENDIX 2

Giving Children an Even Break

Background

Following a request from the Department of Education and Science (DES) in early 2000, the Educational Research Centre (ERC) undertook a nationwide survey of disadvantage in all primary schools in Spring of that year. The survey was conducted via a questionnaire to principals, in which they were asked a number of questions concerning pupils' socioeconomic characteristics (such as the percentage of pupils whose families held medical cards). A total of 80% of ordinary national schools responded to the survey. On the basis of principals' responses to several key questions, an index of disadvantage was produced for each school. The index, which differed depending on whether schools were located in urban or rural areas, was used to rank-order schools for the allocation of additional resources. In urban schools, the index was based on the percentages of pupils in receipt of a grant for free books, with medical cards, living in local authority housing, coming from lone-parent families and families in which the main breadwinner is unemployed. In rural schools, the index was based on the percentages of pupils in receipt of a grant for free books, with medical cards, receiving a household grant for low farm income, and coming from families in which the main breadwinner is unemployed. In addition to data on these key characteristics, the GCEB database contains data on schools' membership of schemes and their total enrolment, as well as on other characteristics associated with disadvantage.

The scheme

Giving Children an Even Break set out to provide additional resources to schools serving pupils from disadvantaged backgrounds, regardless of whether they contained large or small numbers of target pupils. For that reason, almost all schools that returned a questionnaire received a financial allocation under GCEB. However, in addition to extra funding, the highest scoring urban and rural schools were eligible to be considered for additional staff. About one-quarter of schools in urban areas that returned surveys were considered for additional posts to permit the operation of maximum junior and senior class sizes of 20:1 and 27:1 respectively. Just over half of these schools received additional posts based on their existing pupil and teacher numbers. The vast majority of schools that were considered for posts had been previously designated.

In rural areas, the scheme followed the model of Breaking the Cycle, and involved allocating a shared post to clusters of proximal high-scoring schools. Of about 1,500 rural schools that returned surveys, about a quarter were considered for shared posts. In a minority of cases, some schools were deemed to be unclusterable, and a compensatory financial allocation was made instead.