SAMPLE DESIGN AND RESPONSE IN

WAVE 1

OF THE NINE-YEAR COHORT OF

GROWING UP IN IRELAND

MAY **2010**

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1. INTRODUCTION

In this document we describe the methodology and sample design of the first wave of the nine-year cohort of **Growing Up in Ireland**. We begin in Section 2 by considering our objectives followed in Section 3 with a discussion of the population under consideration. In Section 4 we discuss the sample design itself before moving in Section 5 to discuss response rates. Finally, Section 6 outlines the way in which the data were reweighted and grossed prior to analysis.

2. OBJECTIVES

The sampling objective of the first wave of the nine-year cohort was to select a representative random sample of 8,000 9-year-olds. There was a total of 56,497 nine-year-olds registered as resident in Ireland in the 2006 Census of Population. It was that group of children who constituted the population for this phase of the Study. A sample of 8,000 children from a population of 56,497 represents almost 1 in every 7 nine-year-olds resident in the country at that time[1].

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[1] As will be explained below, the actual final sample for analysis was 8,568 children and their families. Given the sample design adopted, once schools agreed to participate in the study and distributed consent and assent forms to children the exact number of participants was beyond the direct control of the Study Team and depended on the response and uptake among the children and their families. Once a child had consented to participate in the Study s/he was included. Accordingly, the actual final completed or effective sample was somewhat higher than the target completed sample of 8,000 children. A total of 8,568 children and their families were ultimately recruited into the first round of the Study.

3. THE POPULATION AND SAMPLING FRAME

**3.1
A population
frame for
nine-year-
olds**

In developing the sampling strategy a number of options, using different sampling frames, were considered. Ideally, the population frame should contain all nine-year-old children who were resident in Ireland at the time of sample selection with each valid element in the population being registered only once. A number of alternative frames were considered in the early stages of the study, including the feasibility of linking to the Child Benefit Register[2] (CBR).

One approach to sample design was to use the national education system as a point of entry to the cohort in question. Based on data provided by the Department of Education and Science, a comprehensive listing of all schools (both public and private) was generated. In addition to detailing the total number of enrolments in each school by age and gender, this database also recorded information on the characteristics of the school such as region, disadvantaged status, size, school type, denominational status and co-educational status. These classificatory variables were important for pre-stratification purposes prior to sample selection.

In addition to providing a comprehensive frame of nine-year-old children, the Primary school system offered a number of other operational and analytical benefits over other sampling frames such as the Child Benefit Register. Using the school as the primary sampling unit allowed for direct access to the principal and teachers, who are key Study informants, and thus facilitated the completion of the school and teacher questionnaires. Secondly, it facilitated the completion of academic achievement tests (the Drumcondra tests in English and Maths.) in a group self-completion setting, thus reducing respondent burden and contact time in the home. Thirdly, the primary school system provided natural clustering of school children (as most pupils live within a relatively restricted geographical catchment area). This facilitates modelling and identifying multi-level effects at the community, school, class, family and child levels.

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[2] Child Benefit is a social welfare entitlement which is payable to the parents or guardians of children under 16 years of age, or under 19 years of age if the child is in full-time education, youth training or has a disability.

**3.2
Structure of the Primary School Sector and Nine-Year-Old Children by School Type**

The primary education sector in Ireland is made up 3,326 schools. As shown in Table 1, these fall into 3 categories viz. Mainstream, Special Schools and Private Schools. The major constituent is the 3,160 mainstream primary schools which are supported by the Department of Education and Science (DoES). The next largest group is made up of just over 120 special schools which draw their funding from the Department of Education and Science and have an enrolment principally made up of children with special learning or physical needs. Finally, there is a third group of privately funded primary schools (fee-paying).

From Table 1 one can see that 116 mainstream schools were recorded as having no nine-year-olds as were 33 of the Special Schools. From complementary information on the mainstream schools it was possible to identify that 80 of theses 116 schools were classified by the Department of Education and Science as 'Infants Only'. These 80 could reasonably be excluded from the valid target sample of schools for selection purposes as they did not contain any 9-year-olds. The other 36 schools which had no children within age scope were small schools which simply did not have any nine-year-olds in the 2005/'06 academic year (the reference year for which data were available) but which may have enrolled some in subsequent school years. Accordingly, although their exclusion would not have any significant (or any) impact on the overall sample we included the 36 schools in question in the population frame used for sampling purposes – albeit with a high probability of including schools which would not, in fact, nine-year-old children. Inclusion of such schools did will not adversely impact on the statistical structure of the sample. In statistical terms these are "deadwood" elements in the population which will not contain any nine-year-olds [3].

No complementary information in terms of being "Infant Only" or other was available in respect of the 33 Special Schools which were classified as having no nine-year-olds. Accordingly, all of these schools were included in the population for sampling purposes so as to be as inclusive as possible.

On this basis, our population for sampling was made up of the 3,177 schools for which Departmental records indicated that nine-year-olds were present plus the 36 mainstream schools which had recorded having no nine-year-olds but which were not classified from other sources as 'Infants Only' plus the 33 Special Schools which were classified as not having nine-year-olds (for which no complementary information was available on whether or not the schools in question were classified as 'Infants Only'). This total of 3,246 schools constituted the population frame.

From Section B of Table 1 one can see that a large proportion of schools contain a relatively small number of nine-year-olds. A total of 47 per cent of schools recorded as having nine-year-olds were recorded as having only 1-10, a further 15 per cent of schools had 11-15 and so on. Just over 15 per cent of primary schools had more than 30 nine-year-olds. This highly skewed distributions of schools in terms of number of 9-year-olds is even

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[3] They will, of course, have resource implications in the extent to which interviewers are contacting and approaching schools with no eligible children.

more apparent in the Special and Private school sectors. One can see, for example, that almost 96 per cent of Special Schools which were recorded as having some nine-year-olds had less than ten.

Table 1: Distribution of 3 main types of primary schools in Ireland

Number of 9-year-olds	A. Number of Schools				B. Percentage of Schools			
	Mainstream Schools	Special Schools	Private Schools	Total Schools	Mainstream Schools	Special Schools	Private Schools	Total Schools
Zero	116	33	0	149				
1-10	1,395	87	10	1,492	45.8	95.6	23.8	47.0
11-15	467	3	4	474	15.3	3.3	9.5	14.9
16-30	695	1	24	720	22.8	1.1	57.1	22.7
31-40	212	0	1	213	7.0	0.0	2.4	6.7
41+	275	0	3	278	9.0	0.0	7.1	8.8
Total Schools	3,160	124	42	3,326				
Schools with 9-year-olds	3,044	91	42	3,177	100.0	100.0	100.0	100.0

Table 2 outlines the regional distribution of schools which recorded having nine-year-olds. It is evident that the size structure of schools across all three sectors varies substantially by region. The Dublin region is particularly noteworthy in terms of the proportion of primary schools which falls into the two largest size categories. A total of 42.4 percent of schools in the Dublin region had more than 30 nine-year-old pupils. The mid East region had the next highest percentage of large schools (22.4 per cent). These two regions compared with a national average of 15.5 per cent. It is clear that schools in the other regions contained substantially fewer nine-year-olds. For example, just under 8 per cent of schools in the Border region, 10 percent in the Midlands and Mid-west regions, and around 14 percent in the South East and South West regions and 6 per cent in the West region had more than 30 nine-year-olds. In contrast, the table shows that as many as two-thirds of primary schools in the West region had 10 or less nine-year-olds.

Table 2: Percentage breakdown of all schools which recorded having nine-year-olds according to number of nine-year-olds and region.

Number of 9-year-olds	Border	Dublin	Mid East	Mid land	Mid West	South East	South West	West	Total
1-10	55.0	22.5	34.8	49.2	53.5	43.3	46.0	66.1	47.0
11-15	14.9	9.1	15.5	18.0	14.9	18.0	16.8	14.0	14.9
16-30	22.2	26.1	27.2	23.0	21.9	24.5	23.1	14.2	22.7
31-40	4.2	15.1	7.2	6.6	3.3	6.3	7.9	3.6	6.7
41+	3.6	27.3	15.2	3.3	6.4	7.8	6.3	2.2	8.8
Total Schools	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Designated disadvantaged status is clearly of importance in terms of sample design. Table 3 provides a breakdown of schools which had recorded having nine-year-olds, according to the number of nine-year-olds and whether or not it had disadvantaged status. One can see that, in general, disadvantaged schools were larger, having more nine-year-olds than others.

Just over 34 per cent of schools with disadvantaged status were recorded as having more than 30 nine-year-olds. This compares with 16 per cent of other schools and 15 per cent of all primary schools in the population.

Table 3: Percentage breakdown of all schools which recorded having nine-year-olds according to number of nine-year-olds and designated disadvantaged status.

Number of 9-year-olds	Not Disadvantaged Status	Disadvantaged Status	Disadvantaged Status Unspecified	All Schools
1-10	48.7	17.4	72.9	47.0
11-15	15.4	14.5	5.3	14.9
16-30	21.7	33.7	18.8	22.7
31-40	5.8	18.8	0.8	6.7
41+	8.4	15.6	2.3	8.8
Total Schools	100.0	100.0	100.0	100.0

Table 4 presents details on the percentage of schools in each region which had disadvantaged status. The most important point from the table is the much higher prevalence in Dublin relative to any other region in the country. Almost one-third of the schools in the Dublin region had designated disadvantaged status. This compared with approximately 4-6 per cent in other regions and 9 per cent nationally. The last two rows of Table 4 indicate that although Dublin contained 13 per cent of primary schools it contained 48 per cent of disadvantaged schools.

Table 4: Percentage breakdown of all schools which recorded having nine-year-olds according to designated disadvantaged status and region.

Disadvantaged Status	Region								
	Border	Dublin	Mid East	Mid land	Mid West	South East	South West	West	Total
Not Disadvantaged Status	92.5	57.2	90.3	93.9	92.1	91.6	90.9	95.0	87.1
Disadvantaged Status	5.8	31.6	4.8	4.5	5.8	5.5	6.5	3.6	8.7
Disadvantaged Status Unspecified	1.6	11.2	4.8	1.6	2.1	2.9	2.6	1.4	4.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
% Disadvantaged	10.5	47.8	5.1	4.0	6.9	7.6	11.6	6.5	100.0
% of primary schools	15.7	13.2	9.2	7.7	10.4	12.1	15.7	15.9	100.0

Religious denomination of the school was also included in the sample design. From the last row of Table 5 one can see that just over 91 per cent of schools were classified as Roman Catholic.

Table 5: Percentage breakdown of all schools which recorded having nine-year-olds according to number of nine-year-olds and Religious Denomination.

Number of 9-year-olds	Religious Denomination			
	Roman Catholic	Other specified	Unspecified	Total
1-10	45.9	64.2	25.6	47.0
11-15	15.3	11.3	9.3	14.9
16-30	22.5	18.3	55.8	22.7
31-40	6.9	5.0	2.3	6.7
41+	9.4	1.3	7.0	8.8
Total Schools	100.0	100.0	100.0	100.0
Per cent of all Schools	91.1	7.6	1.4	100.0

It is clear from the table that these are larger (more nine-year-olds) than schools of Other Specified Religions or of schools with no specified denomination.

Table 6 presents a breakdown of primary schools which recorded having nine-year-olds according to co-educational status. The first point to note is that a very large majority of primary schools are co-educational (88 per cent). Single sex schools are generally larger (contain more nine-year-olds) – especially so among 'All Girls' schools, 49 per cent of which have more than 30 nine-year-olds. This contrasts with 38 per cent among 'All Boys' schools and 15 per cent for all primary schools in aggregate.

Table 6: Percentage breakdown of all schools which recorded having nine-year-olds according to number of nine-year-olds and co-educational status.

Number of 9-year-olds	Co-educational status			
	All Boys	All Girls	Mixed	Total
1-10	16.8	10.4	51.4	47.0
11-15	12.8	10.4	15.3	14.9
16-30	32.8	29.9	21.4	22.7
31-40	11.6	15.7	5.8	6.7
41+	26.0	33.6	6.0	8.8
Total Schools	100.0	100.0	100.0	100.0
Per cent all Schools	7.9	4.2	87.9	100.0

Overall, therefore, this section indicates that the population of primary schools is largely characterised as having relatively small scale schools with 47 per cent of schools which contain nine-year-olds having 1-10 children in that age group. Only 9 per cent of primary schools nationally have more than 40 nine-year-olds and 15 per cent have more than 30. As one would expec,t there is a higher concentration of larger schools in the Dublin region. In general schools with disadvantaged status are larger and are more concentrated in the Dublin region. With over 90 per cent of schools classified as Roman Catholic differentiation by size and religious affiliation

is not a major issue. Similarly, as 88 per cent of schools are co-educational the relationship between number of nine-year-olds and co-educational status is not a major concern in sampling terms.

All of the above breakdowns have provided information on the distribution of *schools*. Table 7 summaries the breakdown of nine-year-old *children* according to the characteristics of the schools considered above. As we shall discuss in the next section, these are the target distributions for our completed sample of children and provide the structure towards which the children should be weighted and grossed prior to analysis.

Table 7: Breakdown of nine-year-old children according to (a) number of nine-year-olds in their school; (b) region; (c) disadvantaged status; (d) type of school and (e) co-educational status and (f) religious denomination.

(a) No. of nine-year-olds	%	(c) Disadvantaged Status	%
1-10	15.2	Not Disadvantaged Status	84.6
11-15	10.9	Disadvantaged Status	13.2
16-30	28.5	Disadvantaged Status Unspecified	2.2
31-40	13.6		
41+	31.8	(d) Type of School	%
		Private School	1.5
(b) Region	%	Special School	0.8
Border	12.1	Mainstream School	97.8
Dublin	24.5		
Mid-East	12.0	(e) Co-education status	
Midland	6.3	All boys	13.7
Mid-West	8.9	All girls	8.1
South-East	11.6	Mixed	78.1
South-West	14.8		
West	9.8	(f) Religious Denomination	%
		Roman Catholic	93.7
		Other specified religion	4.5
		Unspecified	1.8
		Total nine-year-olds	100.0

From Table 7 one can see, for example, that 14 per cent of nine-year-olds are in schools with 31-40 children in that age category, 32 pecent in schools with 41 or more such children. Just over 13 per cent are in disadvantaged schools, 98 per cent in mainstream schools and 78 per cent in co-educational schools.

**3.3
Level of
Coverage of
Nine-Year-
Olds**

In using any sampling frame it is important that it should be as comprehensive as possible with, ideally, no exlusions. In this section we consider how comprehensive our design is in terms of nine-year-olds children. The Department of Education and Science estimates for the year 2005-2006 indicate that 55,105 nine-year-olds were in the school system. This compares with the Census of Population figure of 56,497 from the enumeration conducted on 28th April 2006. This suggests a high degree of concurrence between the Census and Departmental estimates. A few factors may explain the differences between the figures from the two sources.

First, the Departmental figures contain some estimates in respect of schools which had not returned actual figures for the database. Secondly, there were differences in reference period. The Departmental figures relate to the school year 2005/06. The schools returned the data early in that academic year. The Census night relates to the end of the following April (2006). Thirdly, the Departmental figures will not include children who are being home-educated, although this would account for only a small absolute number of nine-year-olds. According to figures provided by the National Educational and Welfare Board (NEWB) there were approximately 1500-2000 children between the ages of 4-16 years being home educated in 2006. On this basis the absolute number of children in any single year-group is likely to be small, averaging about 150 children.

The number of children in care should be considered when using the primary school system as a sampling frame. Table 8 outlines details on the number of nine-year-old children in different types of care in the country. From this one can see that the total number of relevant children is relatively small – 288 in total in 2004. One of the most significant features of the table is that almost all of the children in care were in some form of foster setting. Only 11 nine-year-old children were in residential care. All children in a foster environment will be receiving primary education in the schools system and so will be included in the proposed population frame.

Table 8: Distribution of children in care by type of care in 2004

Type of Care	Number	Per cent
General Foster Care	198	68.8
Special Foster Care	1	0.3
Relative Foster Care	74	25.7
Pre-adoptive Placement	1	0.3
General Residential Care	10	3.5
High Support Residential Care	1	0.3
At home under Care Order	3	1.0
TOTAL	288	100.0

After: Table 2.2, Preliminary analysis of childcare interim dataset, 2004, Dept. of Health and Children

Taking all the issues above into account, it would appear that the coverage of nine-year-old children provided by the schools system is comprehensive and, on balance, that the numbers derived from this frame are very consistent with the corresponding Census figures. The only apparent gap in coverage is the very small number of nine-year-olds who may be educated at home. At most, we estimate that these would represent approximately 150 children.

4. SAMPLE DESIGN

4.1 School Selection

The sample for the first wave of the nine-year cohort was selected on a two-staged clustered basis. In the first instance a set of Primary Sampling Units (PSUs) was selected. The PSUs were, of course, the schools. Children are naturally clustered into the primary school system. A random sample of 1,105 schools was initially selected on a stratified systematic basis. Prior to selection the population of schools were stratified according to:

- County
- Gender mix
- Disadvantaged status
- Religious denomination
- Categorical size (total number of nine-year-old pupils)

All primary level schools were included in the population (i.e. all Mainstream, Special and Private schools) with the exception of the 80 Mainstream schools which had no nine-year-old children and which were classified as 'Infants Only'. Once the school had been recruited into the sample an attempt was made to recruit *all nine-year-old pupils* from the selected schools up to a maximum threshold of 40 students in any one school. In schools which contained more than 40 nine-year-olds a random target sample of 40 pupils was selected by the school principal, with the assistance of the interviewer.

The within school threshold of 40 was arrived at after considerdaion of various sample sizes and assumed response rates. Based on assumptions prior to and during piloting the Study Team experimented with different combinations of numbers of sampled schools and ranges of threshold values (at the pupil level) to determine how these alternative combinations of sampling points (schools) and pupils would affect the likely composition of the resultant sample. On the basis of this experimentation it was decided that an upper threshold of 40 should be imposed on the number of pupils to be recruited from any given school[4].

Since national schools will draw their pupil base from a relatively localised area, one can reasonably expect that within-school variability of pupil characteristics will be less than between-school variability. Maximising the number of primary sampling units (schools) is clearly highly desirable from a statistical perspective. By introducing the within-school pupil threshold,

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[4] Interviewers were instructed to implement the 40-pupil threshold with some degree of discretion. In a small number of schools the number of eligible children was just over 40 pupils. In situations where the number of eligible children was just 1 or 2 over the threshold and where the exclusion of a very small number of children might have led to their upset it was decided to give all children in the school the opportunity to participate in the Study.

this can be achieved whilst simultaneously minimising respondent burden for the principal and staff involved. The design also facilitates the researcher in constructing multi-level (contextual) models at analysis stage. Given the underlying conceptual framework adopted for the Study the design facilitatse the application of multi-level models to identify significant school effects and isolate them from individual and household effects.

Work on sample generation and recruitment of the schools began in March 2007 – after ethical approval had been secured in February of that year. Following the school's selection into the sample, the Study Team dispatched an information pack containing detailed information about the Study for the principal and teachers.

The interviewer assigned to the school followed up with phone contact and arranged to meet with the principal to discuss the school's participation in the Study. On agreeing to participate the principal and relevant staff completed a *School Record Sheet*. This recorded the names and other basic details of all children in the school whose dates of birth fell between 1st November 1997 and 31st October 1998. In situations in which the school listed more than 40 nine-year-old children the principal was provided with a set of random numbers by the interviewer and instructed on how to select which pupils to include / exclude from the sample[5].

Information packs, including consent and assent forms for completion by the parents and children respectively, were dispatched to selected children and their parents/guardians through the school.

Parents/guardians were asked to return completed consent/assent forms (one each for a parent/guardian and child) to the school. The completed forms were then collected and returned to the Study Team by the interviewer. These consent and assent forms contained the address and contact details which were used to make direct contact with parents and arrange the home-based interviews.

In the course of sample generation the interviewer made repeat visits to their portfolio of schools to monitor returns from the families and children and to offer encouragement and assistance in dispatching the information packs and consent forms to the families. At least three rounds of information and consent packs were issued to each family in the school with a nine-year-old child. In addition, the principal and teachers were encouraged to contact the families of the children in question by phone, text messages and also in meeting the parent(s) / guardian(s) on dropping off and collecting their children to and from school.

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[5] Because in the majority of schools the number of children *excluded* was generally much smaller than the number included the Principal was actually instructed in how to use the random number table to *exclude* a usually small number of children from the study.

4.2 Refusal Conversion

Fieldwork for sample generation commenced in March 2007. This provided a three-and-a-half month window of opportunity for recruiting the sample, until mid June of that year. The summer school term in most Primary schools in Ireland ends at the end of June. It is not feasible, however, to carry out fieldwork after mid-June when the school year begins to wind down. By the end of the 2006-2007 academic year a total of 7,665 children and their families had consented/assented to participate in the Study. This meant that some recruitment had to take place in the following school year, in September to early November 2007.

In May/June of 2007 schools with low pupil response rates were identified and requested to issue a further set of information and consent/assent packs to the families who had not been recruited for the Study. Although this was well received by the principals and other staff in the schools many noted that they had previously done all they could to encourage families and pupils to participate in the project and that issuing further information packs would not be productive.

When the first phase of recruitment had been completed at the end of June a further systematic review of response rates was undertaken. At that time it was decided to carry out a major refusal conversion exercise at both levels of sample generation, i.e. at both the school and child/family levels. This involved the Study Team returning to schools which had a high level of refusals at the family level. A total of 247 schools were re-visited in September 2007. A revised, slightly shorter, version of the information sheet was prepared for this phase of refusal conversion. This shorter information sheet had been developed largely at the suggestion of the principals, most of whom felt that by that point in the exercise families had already received a very substantial volume of information on the project. In the schools in question the principal was requested to issue the information and consent/assent packs to the families for a final (generally fourth) time. In addition to refusal conversion at the pupil level a sample of 67 schools which had definitively refused to participate in the Study by mid June were re-approached with a view to converting them to active participants. In undertaking the refusal conversion exercise it was decided to concentrate on schools with disadvantaged status as well as those in the Dublin region as these had the highest refusal rates in the recruitment process (see Section 5 below).

As had been the experience of ad hoc refusal conversion in May/June 2007 the systematic refusal conversion of September 2007 was met with varying levels of success. The conversion at both school and pupil level had been attempted on an on-going basis throughout the main fieldwork period from March to June 2007. Accordingly, schools which had previously refused to participate had already been approached on several occasions by Head Office in an attempt to secure their co-operation. Similarly, the principals, teachers and other staff in most cases felt that they had exhausted their efforts to encourage families to participate in the Study through previous dispatch of information packs and other approaches to the families (as noted above, such as meeting with them on dropping or collecting the children from school as well as phoning the families and sending them text messages).

5. THE SAMPLE AND RESPONSE RATES

**5.1
The School
Level**

A target sample of 1,105 schools was selected for processing in the first round of the nine-year cohort of the project. These were approached first by letter and then by follow-up phone call and personal visit by the interviewer, as described in Section 4 above.

Table 9 provides a breakdown of the target sample according to the main demographic characteristics. From this one can see that larger schools and those with designated disadvantaged status were over represented in the target sample. This over representation of larger schools was included as school level response rates fell with school size.

Table 9: Breakdown of schools in (i) target sample and (ii) population according to (a) number of nine-year-olds in the school; (b) region; (c) disadvantaged status; (d) type of school and (e) co-educational status and (f) religious denomination.

	(i) % Target Sample	(ii) % Population		(i) % Target Sample	(ii) % Population
A. No. of nine- year-olds			**C. Disadvantaged Status**		
1-10	31.0	47.0	<u>Not</u> Disadvantaged Status	84.4	87.1
11-15	12.9	14.9	Disadvantaged Status	12.2	8.7
16-30	23.7	22.7	Disadvantaged Status Unspecified	3.3	4.2
31-40	13.2	6.7			
41+	19.2	8.8	**D. Type of School**		
			Private School	1.4	1.3
B. Region			Special School	1.9	2.9
Border	13.6	15.7	Mainstream School	96.7	95.8
Dublin	20.2	13.2			
Mid-East	9.6	9.2	**E. Co-education status**		
Midland	7.2	7.7	All boys	10.9	7.9
Mid-West	10.0	10.4	All girls	6.3	4.2
South-East	11.0	12.1	Mixed	82.8	87.9
South-West	15.7	15.7			
West	12.6	15.9	**F. Religious Denomination**		
			Roman Catholic	91.4	91.1
			Other specified religion	7.1	7.6
			Unspecified	1.4	1.4
				1000	**100.0**
			Total schools	1,105	3,177

Table 10: School-level recruitment (response) rates according to (a) number of nine-year-olds in the school; (b) region; (c) disadvantaged status; (d) type of school and (e) co-educational status and (f) religious denomination.

	% Target Sample Participating		% Target Sample Participating
A. No. of nine-year-olds		**C. Disadvantaged Status**	
1-10	88.0	Not Disadvantaged Status	83.3
11-15	83.1	Disadvantaged Status	76.3
16-30	82.4	Disadvantaged Status Unspecified	71.1
31-40	77.4		
41+	74.5	**D. Type of School**	
		Private School	43.8
B. Region		Special School	90.5
Border	87.4	Mainstream School	82.4
Dublin	74.9		
Mid-East	77.4	**E. Co-education status**	
Midland	87.7	All boys	81.7
Mid-West	76.6	All girls	77.5
South-East	86.0	Mixed	82.4
South-West	85.0		
West	85.0	**F. Religious Denomination**	
		Roman Catholic	83.0
		Other specified religion	77.5
		Unspecified	47.1
		All Schools	82.3
		Total number of schools in target sample	1,105

Table 10 outlines recruitment rates among schools broken down by school characteristics. A total of 910 schools from the target sample of 1,105 were successfully recruited into the project, giving an overall school-level response of 82.3 per cent. Of note from the table is the very strong relationship between school size (as measured by number of nine-year-olds) and response rate. Participation fell from 88.0 per cent for the smallest schools to 74.5 per cent among schools with 40 or more nine-year-olds. Similarly, participation among schools with disadvantaged status was also lower (by 7 percentage points) than among other schools. These trends reflected the workload associated with participation in the study for larger schools. In a large school there was a substantial workload involved in identifying the set of relevant pupils as well as the coordination and completion of the questionnaires which were filled out by the teachers on themselves and also on each of the study children. Organising group self-completion sessions for the Drumcondra reading and maths. tests (often

several sessions and usually on different days) was quite onerous and logistically problematic for larger schools[6].

Section B of Table 10 indicates lower response rates in the Dublin, Mid-East and Mid-West regiions. The lower rates in the former two regions are related to school size. We saw in Table 2 above that these are the regions with the highest proportions of larger schools.

The reader will appreciate that as the sample of pupils was being recruited one could focus only on the school-based characteristics of the children to assess its representativeness. On-going monitoring took place of participation rates by the school-based characteristics outlined above and it was on this basis that the sample was increased among Dublin and larger schools. Ultimately, a total of 910 schools agreed to participate in the study, giving the school level participation rate of 82 per cent. The effect of over-representation of the largest schools with 40 or more nine-year-olds was moderated in large measure by the fact that although the schools in question had a higher selection probability the children within those schools actually had a lower selection probability. In smaller schools as an attempt was made to recruit all children who fell within age range the within school selection probability was '1'. For children in larger schools, where the threshold of 40 children was imposed, the within school selection probability was less than '1'. As will be discussed in Section 6 below, size of school (number of nine-year-olds) was, accordingly, a critical factor in the reweighting of the data.

5.2 Recruitment at the Pupil/Family Level

Given the two-stage design outlined in Section 3.4 above, school-level recruitment was the first phase of the process. The second phase was the recruitment of the children within the schools. Table 11 outlines within the schools. This is based on the total number of consents returned from the school out of the total number of eligible children. The figures take account of the threshold of 40 children from any given school. A valid consent was taken as one in which the child's assent form and parent's / guardian's consent form were signed and returned to the Study Team by the school.

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[6] The Study Team gratefully acknowledges the tremendous work undertaken by the schools on its behalf in participating in the Study and adding to an already busy work schedule in the school.

Table 11: Within school response rates based on number of consents secured classified according to (a) number of nine-year-olds in the school; (b) region; (c) disadvantaged status; (d) type of school and (e) co-educational status and (f) religious denomination.

	Total Eligible 9 year olds	Consents secured	Response rate		Total Eligible 9 year olds	Consents secured	Response rate
(a) No. of 9-year-olds				**(c) Disadvantaged Status**			
1-10	2109	1286	61.0	Not Disadvantaged Status	14,343	8,485	59.2
11-15	1449	852	58.8	Disadvantaged Status	2,474	1,031	41.7
16-30	4580	2566	56.0	Disadvantaged Status Unspecified	237	129	54.4
31-40	3089	1544	50.0				
41+	5827	3397	58.3	**(d) Type of School**			
	17054	9645	56.6	Private School	149	81	54.4
(b) Region				Special School	88	48	54.5
Border	1,971	1,092	55.4	Mainstream School	16,817	9,516	56.6
Dublin	4,436	2,429	54.8		17,054	9,645	56.6
Mid-East	2,156	1,256	58.3	**(e) Co-education status**			
Midland	1,150	644	56.0	All boys	2,587	1,359	52.5
Mid-West	1,331	762	57.3	All girls	1,638	867	52.9
South-East	1,973	1,121	56.8	Mixed	12,829	7,419	57.8
South-West	2,663	1,528	57.4		17,054	9,645	56.6
West	1,374	813	59.2	**(f) Religious Denomination**			
				Roman Catholic	16,146	9,083	56.3
	17,054	9,645	56.6	Other specified religion	759	481	63.4
				Unspecified	149	81	54.4
				Total schools	17,054	9,645	56.6

From the table one can see that the within school response rate was 57 per cent – i.e. 57 per cent of eligible children and their families returned the assent and consent forms. Perhaps the most important point from the table is the very stable level of within school response rate across all categories of schools. The only two types of school which depart from the national average of 57 per cent are the smallest schools where the rate is 61 per cent and the schools which are designated as having disadvantaged status. This latter group of schools have a within school rate of 42 per cent. As noted above, this was after the very focused refusal conversion exercise aimed at the schools in question, both on an on-going basis throughout sample recruitment and also on a systematic basis in September/October 2007.

A further aspect of response involves going from the stage of consenting to participate in the study to actually completing the interviews, in both the school and home. From Table 12 one can see that 10 per cent of children and/or their families who initially consented to participate in the study did not complete the surveys when the interviewer called to their home. Themost frequent reason was lack of time, notwithstanding flexibility on the part of the interviewer to conduct the interviews on a day and at a time of day which would accommodate the family.

Table 12 indicates that 8,655 children and their families successfully completed the survey. The final file for analysis includes 8,568 children and families. The difference of 87 children/families is made up of respondents who had to be excluded from the file for analysis due either to their request to have their information deleted from the survey after interviews were completed or to a level of incomplete information which made their surveys unusable.

Table 12: Attrition between consenting into the study and completing the school and home-based interviews classified according to (a) number of nine-year-olds in the school; (b) region; (c) disadvantaged status; (d) type of school and (e) co-educational status and (f) religious denomination.

	Consents secured	Interviews completed	Response rate		Consents secured	Interviews completed	Response rate
(a) No. of 9-year-olds				**(c) Disadvantaged Status**			
1-10	1,286	1,175	91.4	Not Disadvantaged Status	8,485	7,663	90.3
11-15	852	772	90.6	Disadvantaged Status	1,031	884	85.7
16-30	2,566	2,257	88.0	Disadvantaged Status Unspecified	129	108	83.7
31-40	1,544	1,398	90.5		9,645	8,655	89.7
41+	3,397	3,053	89.9				
	9,645	8,655	89.7	**(d) Type of School**			
(b) Region				Private School	81	67	82.7
Border	1,092	968	88.6	Special School	48	41	85.4
Dublin	2,429	2,182	89.8	Mainstream School	9,516	8,547	89.8
Mid-East	1,256	1,122	89.3		9,645	8,655	89.7
Midland	644	577	89.6	**(e) Co-education status**			
Mid-West	762	691	90.7	All boys	1,359	1,217	89.6
South-East	1,121	1,006	89.7	All girls	867	772	89.0
South-West	1,528	1,360	89.0	Mixed	7,419	6,666	89.9
West	813	749	92.1		9,645	8,655	89.7
	9,645	8,655	89.7	**(f) Religious Denomination**			
				Roman Catholic	9,083	8,175	90.0
				Other specified religion	481	413	85.9
				Unspecified	81	67	82.7
				Total schools	9,645	8,655	89.7

6. REWEIGHTING THE DATA

All sample survey data should be re-weighted or statistically adjusted prior to analysis to ensure that the structure of the completed sample along key dimensions is in line with the population from which it has been selected. By statistically re-weighting the data one can compensate for any imbalances in the recruited sample as compared with the population of interest. These imbalances may arise from a number of sources, usually the population frame being used, the sample design or differential response patterns within subgroups of the population under study.

The sample weights for the first phase of the nine-year cohort of **Growing Up in Ireland** were constructed by adjusting the distribution of the sample to known population figures. The population distributions were derived from tabulations which were prepared by the Central Statistics Office on the number and characteristics of children and their families from the 2006 Census of Population.[7]. The 2006 Census of Population provided the most up-to-date figures on the distribution of nine-year-olds in the country.

Two main steps were involved in constructing the weights to mirror the main steps in sample recruitment. As noted in Section 4 above the sample was selected using a two-stage design, initially through the school as the Primary Sampling Unit and subsequently at the child/family level within the school. The re-weighting scheme was implemented so as to reflect that design. This involved creating an initial weight at the school level followed by a household level weight. The system used for generating the weights used a minimum information algorithm so that the distribution of cases in the completed sample matched a set of control totals for the population. It is based on an iterative approach to the fitting of column marginals from the completed sample to those of the population as a whole. The program used for generating the weights is known as GROSS. It was developed for the ESRI in 1996[8] and has been used on all survey work carried out by the Institute since that time. As well as containing a weighting factor (WGT_9YR) the datafile also contains a grossing factor (GROSS_9YR). The latter calibrates to the population total of 56,479 nine-year-old children

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[7] The Study Team gratefully acknowledges the substantial work by the CSO in the preparation of the detailed tabulations in question.
[8] This was developed by Johanna Gomulka form the London School of Economics. See, for example,
Gomulka, J., 1992. "Grossing-Up Revisited", in R. Hancock and H. Sutherland (Eds.), Microsimulation Models for Public Policy Analysis: New Frontiers, STICERD Occasional Paper 17, LSE.
Gomulka, J., 1994. "Grossing Up: A Note on Calculating Household Weights from Family Composition Totals." University of Cambridge, Department of Economics, Microsimulation Unit Research Note MU/RN/4, March 1994.

in the population. The weighting factor incorporates the structural adjustment of the completed sample to the population, whilst maintaining the total completed sample size of 8,568 cases. Both GROSS_9YR and WGT_9YR provide the user with the same structural breakdown of the data. The latter can, of course, be used in significance testing.

Table 13 summarises the sample and control totals for the unweighted and weighted/grossed results at the school level. The child is the unit of analysis. The characteristics of his/her school are assigned to the child. Given the way in which the sample was generated these were the characteristics available to the Study Team for monitoring during sample recruitment. By definition, none of the individual, family or household characteristics was available to the Study Team as the sample was being recruited through the schools as that information was recorded only on interview at the household level.

Table 13: Breakdown of (a) population of nine-year-olds (b) unweighted sample and (c) weighted sample according to school-level characteristics – school level weights

School-level classificatory variable	A Number of children in population	B Percentage of children in population	C Number of children in **unweighted** sample	D Percentage of children in **unweighted** sample	E Percentage point difference, unweighted sample minus population (Cols. D-B)	F Percentage of children in **weighted** sample
No. of 9-year-olds in school						
1 to 10	8,593	15.2	1,167	13.6	-1.6	15.2
11 to 15	6,155	10.9	760	8.9	-2.0	10.9
16 to 30	16,126	28.5	2,228	26.0	-2.5	28.5
31 to 40	7,669	13.6	1,383	16.1	2.6	13.6
41 or more	17,954	31.8	3,032	35.4	3.6	31.8
Type of school						
Private school	820	1.5	67	0.8	-0.7	1.5
Special school	424	0.8	42	0.5	-0.3	0.8
Mainstream school	55,253	97.8	8,461	98.7	0.9	97.8
Region						
Border	6,817	12.1	951	11.1	-1.0	12.1
Dublin	13,844	24.5	2,167	25.3	0.8	24.5
Mideast	6,770	12.0	1,113	13.0	1.0	12.0
Midland	3,579	6.3	571	6.7	0.3	6.3
Midwest	5,036	8.9	688	8.0	-0.9	8.9
Southeast	6,561	11.6	989	11.5	-0.1	11.6
Southwest	8,370	14.8	1,338	15.6	0.8	14.8
West	5,519	9.8	753	8.8	-1.0	9.8
Disadvantaged status						
Disadvantaged status	7,445	13.2	876	10.2	-3.0	13.2
Not disadvantaged status	49,052	86.8	7,694	89.8	3.0	86.8
Religious denomination						
Roman Catholic	52,940	93.7	8,100	94.5	0.8	93.7
Church of Ireland	1,687	3.0	245	2.9	-0.1	3.0
Multi denominational	839	1.5	129	1.5	0.0	1.5
Other	1,031	1.8	96	1.1	-0.7	1.8
Co-educational status						
All boys	7,762	13.7	1,205	14.1	0.3	13.7
All girls	4,594	8.1	771	9.0	0.9	8.1
Mixed	44,141	78.1	6,594	76.9	-1.2	78.1

Table 13 shows that six main variable domains were used in the generation of the first stage (school-based) weight. These were
- Number of nine-year-olds in the school (as a measure of school size and based on administrative information provided by the Department of Education and Science)
- Type of school (Private, Special or Mainstream – based on administrative information provided by the Department of Education and Science)
- Region – (based on planning region)
- Designated disadvantage status (based on administrative information provided by the Department of Education and Science)
- Religious denomination (based on administrative information provided by the Department of Education and Science)
- Co-educational status (based on administrative information provided by the Department of Education and Science)

A comparison of Columns B and C of the table indicates that the percentage breakdown of the unweighted completed sample is close to that of the population in terms of school size (as measured in terms of number of nine-year-olds). The completed sample is slightly over-represented by children from larger schools. This resulted from the refusal conversion and other exercises which were aimed at ensuring that the larger and also disadvantaged schools (which, as discussed in Section 5 above had lower response rates than other schools) were adequately represented in the effective sample for analysis. The table shows, for example, that the completed sample contained 35.4 per cent of children from schools with 41 or more nine-year-olds compared with a total of 31.8 per cent in the population. Similarly, one can see from the table that children from disadvantaged schools were somewhat under-represented in the sample, accounting for 10.2 per cent of participating nine-year-olds compared with 13.2 per cent in the population as a whole[9].

Table 13 indicates that other than in respect of school size and disadvantaged status the structure of the completed sample was very much in line with the population in terms of regional distribution, religious denomination and co-educational status. Children attending Private and Special schools were somewhat under-reported in the completed sample – accounting for 1.3 per cent of participating children compared with a population total of 2.3 per cent.

Column F of Table 13 provides details on the percentage breakdown of the weighted sample. Comparison of the percentage breakdown figures in Column F (weighted sample) with those in Column B (population totals) shows that the first stage (school-based) weight worked well and brought the sample structure completely in line with the population figures.

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[9] A national study of all schools which were designated as being disadvantaged was launched at approximately the same time as **Growing Up in Ireland**. The timing of the dedicated study of disadvantaged schools had an adverse impact on recruitment among disadvantaged schools, with some schools which had initially agreed to participate in **Growing Up in Ireland** subsequently withdrawing in favour of the dedicated study on disadvantaged status.

This first stage school-based weight was carried forward into the re-weighting and grossing of the sample at the second stage - the child or family level. Table 14 shows that a total of 15 main variable domains was used in the generation of the second stage weight. The population figures for each were derived from specially prepared tabulations from the Census of Population, 2006. These were as follows:

1. **Child's sex**
2. **Family structur**e – based on single or two parent family combined with number of persons (not children) in the family unit. Accordingly, we have cohabiting, married couples, single mother and single father households. In addition, one can see from the table that there is a 'non family unit' category.
3. **Mother's age** – four categories of mother's age.
4. **Mother's principal economic status** – ranging from 'at work outside the home' to 'mother not resident' (synonymous, of course, with lone father families).
5. **Father's principal economic status** – comparable to Mother's principal economic status above
6. **Mother's highest level of educational attainment** - ranging from no formal education or primary only to 'other', with the latter including mother not resident and also mother still a student.
7. **Father's social class** – based on the current or most recent occupation of father, including those who are non-resident as well as those who validly do not have a social class classification because they have never worked outside the home.
8. **Mother's social class** – as above, based on current or most recent occupation. The table indicates the higher proportion of mothers who do not have a social class classification because they do not or have not in the past worked outside the home.
9. **Household social class** – this is based on the highest of either mother's or father's social class. This is a standard way to assign the collective household social class and is referred to as the 'dominance' criterion.
10. **Mother's ethnicity** – this is based on the question on ethnic background used in the Census of Population.
11. **Household tenure** – this is a standard variable which summarises whether or not the family owns, rents or otherwise lives rent free in the accommodation.
12. **Number of nine-year-olds in the child's school** – this is a measure of school size. It is the same variable as was used in the derivation of the school-based weight. It was decided to include this variable in the family-based weights because of its importance in sampling and to ensure that its effect as a control variable was not diminished when the school-based weight was included with the eleven family-based characteristics outlined above.
13. **Type of school** – as with variable 12 this is the same variable as was used in the derivation of the school-based weight.
14. **Region** – geographical location of the child. This variable was also included at the school-based level.
15. **Disadvantaged status** – this refers to the status of the school which the child attends.

In generating the household-level weights the first level school-based weight was brought forward and used as an initial weighting factor for each child. In addition, the last four variables above (variables 12 -15) were explicitly included in the household-based weights to ensure that their effect as controls was not diminished when included with the household-level characteristics.

Table 14: Breakdown of (a) population of nine-year-olds (b) unweighted sample and (c) weighted sample according to child and family characteristics – child / family-level weights

	Population		Unweighted Sample		Weighted Sample
	No of Children	% of Children	No of Children	% of Children	% of Children
Characteristic Variable	**A**	**B**	**C**	**D**	**E**
Child's sex					
Girls	27,466	48.6	4,407	51.4	48.9
Boys	29,031	51.4	4,163	48.6	51.1
Family Structure					
Cohabiting, 3 persons	501	0.9	103	1.2	0.9
Cohabiting, 4 persons	1,110	2.0	187	2.2	2.0
Cohabiting, 5+ persons	1,401	2.5	227	2.6	2.5
Husband, wife, 3 persons	1,915	3.4	300	3.5	3.4
Husband, wife, 4 persons	12,803	22.7	2,279	26.6	22.9
Husband, wife, 5 persons	15,028	26.6	2,600	30.3	26.9
Husband, wife, 6 persons	8,086	14.3	1,322	15.4	14.4
Husband, wife, 7+ persons	4,210	7.5	532	6.2	7.6
Lone father, 2 or 3 persons	402	0.7	19	0.2	0.7
Lone father, 4+ persons	404	0.7	26	0.3	0.7
Lone mother, 2 persons	1,599	2.8	208	2.4	2.7
Lone mother, 3 persons	2,931	5.2	320	3.7	5.1
Lone mother, 4 persons	2,348	4.2	232	2.7	4.1
Lone mother, 5+ persons	2,405	4.3	172	2.0	4.1
Non family unit	1,354	2.4	43	0.5	1.8
Mother's Age					
Mother, 30 yrs or less	5,086	9.0	534	6.2	8.9
Mother, 31-39 yrs	23,037	40.8	3,283	38.3	40.8
Mother, 40-49 yrs	25,671	45.4	4,478	52.3	45.9
Mother, 50 yrs or more	1,897	3.4	230	2.7	2.9
Mother, not resident	806	1.4	45	0.5	1.5
Mother's Principal Economic Status (PES)					
Mother, work outside home	29,094	51.5	4,887	57.0	52.1
Mother, retired	87	0.2	12	0.1	0.2
Mother, home duties	20,733	36.7	3,288	38.4	37.2
Mother, other PES	4,423	7.8	295	3.4	7.2
Mother not resident	806	1.4	45	0.5	1.5
Non family unit	1,354	2.4	43	0.5	1.8

Table 14. / cont'd

Characteristic Variable	Population		Unweighted Sample		Weighted Sample
	No of Children	% of Children	No of Children	% of Children	% of Children
	A	B	C	D	E
Father's Principal Economic Status (PES)					
Father, work outside home	40,881	72.4	7,176	83.7	73.4
Father unemployed	2,507	4.4	181	2.1	4.4
Father retired	218	0.4	32	0.4	0.4
Father Student	158	0.3	46	0.5	0.3
Father, other PES	1,133	2.0	98	1.1	2.0
Father home duties	963	1.7	62	0.7	1.7
Father not resident	9,283	16.4	932	10.9	16.1
Non family unit	1,354	2.4	43	0.5	1.8
Mother's education					
Mother, Primary educ. or none	3,490	6.2	278	3.2	6.2
Mother, inter Cert or equivalent	12,623	22.3	1,189	13.9	22.6
Mother, Leaving Cert o equivalent	18,981	33.6	2,627	30.7	34.0
Mother, non-degree (21/2 level)	7,635	13.5	2,076	24.2	13.8
Mother, primary degree	5,397	9.6	1,358	15.8	9.7
Mother, post-grad. Degree	3,091	5.5	831	9.7	5.6
Mother, other education	5,280	9.3	211	2.5	8.2
Father's Social Class					
Father Professional	3,749	6.6	837	9.8	6.7
Father, Managerial	13,926	24.6	2,281	26.6	24.9
Father, Other Non Manual	5,310	9.4	1,149	13.4	8.1
Father, Skilled Manual	13,213	23.4	2,039	23.8	23.6
Father, Semi-skilled Manual	6,114	10.8	885	10.3	11.0
Father, Unskilled Manual	2,089	3.7	198	2.3	3.7
Father does not have a class	1,459	2.6	206	2.4	3.9
Not family unit	1,354	2.4	43	0.5	1.8
Father, not resident	9,283	16.4	932	10.9	16.1
Mother' Social Class					
Mother Professional	2,854	5.1	802	9.4	5.2
Mother, Managerial	15,621	27.6	3,121	36.4	28.1
Mother, Other Non Manual	13,062	23.1	2,024	23.6	23.4
Mother, Skilled Manual	7,947	14.1	1,065	12.4	14.2
Mother, Semi-skilled Manual	6,769	12.0	826	9.6	12.1
Mother, Unskilled Manual	2,065	3.7	237	2.8	3.7
Mother does not have a class	6,019	10.7	408	4.8	10.1
Not family unit	1,354	2.4	43	0.5	1.8
Mother, not resident	806	1.4	44	0.5	1.4

Table 14. / cont'd

Household's Social Class					
Household Professional	4,535	8.0	1,168	13.6	8.2
Household, Managerial	18,520	32.8	3,313	38.7	33.2
Household, Other Non Manual	10,503	18.6	1,693	19.8	18.9
Household, Skilled Manual	9,330	16.5	1,199	14.0	16.6
Household, Semi-skilled Manual	5,165	9.1	601	7.0	9.3
Household, Unskilled Manual	1,656	2.9	137	1.6	1.7
Household does not have a class	5,434	9.6	416	4.9	10.3
Not family unit	1,354	2.4	43	0.5	1.8
Mother's ethnicity					
Mother, Irish	50,687	89.7	7,749	90.4	89.9
Mother, Other White	3,223	5.7	501	5.8	5.7
Mother, African, Other Black	706	1.2	131	1.5	1.3
Mother, Asian/Chinese	542	1.0	126	1.5	1.0
Mother, Other ethnicity	533	0.9	18	0.2	0.7
Mother not resident	806	1.4	45	0.5	1.5
Household tenure					
Owner Occupier	43,635	77.2	7,159	83.5	77.4
Local Authority Purchaser	837	1.5	65	0.8	1.4
Local Authority Rental	7,043	12.5	715	8.3	12.5
Private Rental	4,603	8.1	594	6.9	8.0
Occupied Rent Free	379	0.7	37	0.4	0.6
Number of nine-year-olds in school					
1 to 10 nine-year-olds	8,593	15.2	1,167	13.6	14.8
11 to 15 nine-year-olds	6,155	10.9	760	8.9	10.8
16 to 30 nine-year-olds	16,126	28.5	2,228	26.0	28.6
31 to 40 nine-year-olds	7,669	13.6	1,383	16.1	13.7
41 or more nine-year-olds	17,954	31.8	3,032	35.4	32.1
Type of school					
Private	820	1.5	67	0.8	1.5
Special School	424	0.8	42	0.5	0.7
Mainstream School	55,253	97.8	8,461	98.7	97.8
Region					
Border	6,817	12.1	951	11.1	12.1
Dublin	13,844	24.5	2,167	25.3	24.6
Mideast	6,770	12.0	1,113	13.0	12.0
Midland	3,580	6.3	571	6.7	6.4
Midwest	5,036	8.9	688	8.0	8.9
Southeast	6,561	11.6	989	11.5	11.7
Southwest	8,370	14.8	1,338	15.6	14.9
West	5,519	9.8	753	8.8	9.4
Disadvantaged status of school					
Disadvantaged status	7,445	13.2	876	10.2	13.2
Not disadvantaged status	49,052	86.8	7,694	89.8	86.8

The table shows that the completed sample is well balanced (relative to the population) in terms of the child's sex. It is also generally balanced in terms of household structure, with some evidence to suggest that it is over represented among larger two-parent families where the couples are married. Lone parent families, especially lone fathers, were under represented. Non-family units were particularly difficult to recruit into the study. These included children who were being fostered or in homes where their primary caregiver was not an immediate relative. Respondents whose mother was aged 40-49 years were also more likely to have been recruited into the sample. Children whose mother and/or father worked outside the home or whose mother was principally engaged on home duties were also more likely to have participated in the sample.

In common with most social surveys, higher participation rates among better educated parents and those in higher social class categories were evident in the structure of the completed sample. The interaction of education, social class and principal economic status is the main driver behind the higher participation rates among mothers who were at work outside the home. One might initially feel that this group would be less likely to participate in the survey because of the time involved. Time considerations appear to have been compensated for by class and education effects.

Mother's ethnicity is closely in line with the population figures. Reflecting trends in participation with social class, children in owner occupied homes were over represented.

The breakdown of the sample after it has been weighted is outlined in Column E of the table. Comparison of Columns E and B shows that the weights (and grossing factor) adjust the structure of the completed sample in line with the population figures with only very limited differences evident between the weighted sample and population.

The final weight was constrained in the range 0.2 to 4.6 times the mean weight for all cases to avoid a small number of observations at either ends of the distributions potentially having too much impact on the results.