READING LITERACY IN DISADVANTAGED PRIMARY SCHOOLS

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Preface

The 2001 *Review of the National Anti-Poverty Strategy* (Goodbody Economic Consultants, 2001) proposed a target of halving the proportion of pupils with serious literacy difficulties in designated disadvantaged primary schools by 2006, while *Building an Inclusive Society* (2002) and the *National Action Plan against Poverty and Social Exclusion* (2003) proposed the broader aim of halving the proportion of primary school pupils with serious literacy difficulties by 2006. Arising from these targets, the Department of Education and Science asked the Educational Research Centre in June 2002 to conduct a study of reading standards in designated disadvantaged schools. The terms of reference for the study were to:

1. obtain baseline data on the reading achievement of pupils in First, Third and Sixth classes in a representative sample of designated disadvantaged schools, using an appropriate reading test;

2. identify variables associated with the reading achievement of these pupils;

3. make recommendations that would facilitate reaching the targets for reading literacy specified in the National Anti-Poverty Strategy.

Advisory Committee

In November, 2002, an Advisory Committee, consisting of representatives of the educational partners, was appointed to advise the Educational Research Centre on its work on the survey. The committee members were: Bairbre Boylan (National Council for Curriculum and Assessment), Carmel Nic Airt (An Foras Pátrúnachta), Éamonn Murtagh and Richard Byrne (Inspectorate: Department of Education and Science), Seamus McLoughlin and Jim O'Donovan (Social Inclusion Unit: Department of Education and Science), Máire Ní Choileáin (Gaelscoileanna), Mary Killeen (National Parents' Council – Primary), Noel Ward (Irish National Teachers' Organisation), Ruby Morrow (Church of Ireland Board of Education), and Sr Bernadette Sweeney (Catholic Primary School Managers' Association). The Educational Research Centre was represented by Gerry Shiel, Eemer Eivers and Fionnuala Shortt. The committee met six times during the study.

Survey Scope and Design

Pupils' reading literacy was assessed using a recently-developed test: the *Drumcondra Sentence Reading Test* (DSRT). Other measures included questionnaires for principals (School Questionnaire), class teachers (Teacher Questionnaire), learning-support teachers (Learning-Support Teacher Questionnaire), pupils (Pupil Attitudes Questionnaire) and parents (Parent Questionnaire). Class teachers were also asked to complete a Pupil Rating Form in respect of every pupil in their class. Questionnaire content was informed by issues highlighted in previous national and international surveys of reading literacy. As well as the quantitative components of the survey, focus group interviews (with principals, teachers and parents) were conducted in two areas: a provincial town and a Dublin suburb.

Organisation of This Report

There are 12 chapters in this report. Chapter 1 provides a summary of some previous research outlining the relationship between literacy and social disadvantage, including factors relating to home, school and to the individual. It also discusses the National Anti-Poverty Strategy targets and the terms of reference for the study. Chapter 2 describes the assessment instruments, while Chapter 3 details the procedures used in the study, including sample design, test administration and calculation of weights. Chapter 4 describes the main achievement outcomes of the survey, and describes how the DSRT was re-scaled, based only on the performance of pupils in the Literacy Survey. Finally,

teachers', parents' and pupils' estimates of achievement in reading and related areas are compared to the pupils' DSRT scores. Chapter 5 is concerned with pupil characteristics. Demographic characteristics, educational experiences, engagement with learning, and pupils' attitudes, aspirations and expectations are all described in terms of their association with pupil achievement.

Chapter 6 examines the relationship between various home background factors and achievement, including family structure and size, socioeconomic status, and the family as a learning environment. Aspects of the classroom environment are outlined in Chapter 7, including teacher characteristics, classroom composition, parent-teacher interaction, attitudinal variables related to 'school climate', and practices related to the teaching of English, to pupil assessment, and to homework. Finally, the relationships between a number of classroom environment variables and pupil achievement are examined. Chapter 8 explores the associations between reading achievement and a variety of school characteristics, including enrolment characteristics, parent-school interaction, school policy and planning issues, learning resources and staffing.

Chapter 9 is concerned with the provision of learning support in schools, including learning-support teachers' qualifications, experience and participation in in-career development. It examines the work of learning-support teachers, and the provision of learning support in the schools in which the learning-support teachers were employed. Chapter 10 summarises interviews carried out (separately) with groups of principals, teachers and parents. It outlines participants' views on issues related to reading achievement among pupils in designated disadvantaged schools. Chapter 11 presents a multilevel model of reading achievement, where the contributions of various factors associated with reading performance in Third class in designated schools are considered. Finally, Chapter 12 summarises some of the main findings of the report, and makes recommendations for future policy and practice.

Acknowledgements

1. Educational Disadvantage and Reading Literacy

The National Anti-Poverty Strategy (*Sharing in Progress*, 1997; *Building an Inclusive Society*, 2002; *National Action Plan against Poverty and Social Exclusion*, 2003) has as one of its key targets the halving of the proportion of primary school pupils with serious literacy difficulties by 2006. Furthermore, the 2001 *Review of the National Anti-Poverty Strategy* (Goodbody Economic Consultants, 2001) proposed as a related target the halving of the number of pupils with serious literacy difficulties *in designated disadvantaged primary schools* by 2006. To provide baseline data to monitor achievement of these targets, the Department of Education and Science asked the Educational Research Centre to carry out a survey in 2003 of reading literacy in a representative sample of designated disadvantaged primary schools.

This chapter outlines the context in which the survey was conducted, and describes how the survey instruments are linked to previous research. The first section situates the study in the context of the importance of reading literacy, previous research on the reading performance of disadvantaged pupils, current school-based interventions designed to address educational disadvantage, the targets for reading literacy in the National Anti-Poverty Strategy (NAPS), and the Terms of Reference for the study provided by the Department of Education and Science. The remaining sections review previous research on the development of children's reading ability, and associations between home/community characteristics, school characteristics, classroom characteristics, pupil characteristics and reading. The review sections are intended to provide background information on issues examined in the remainder of the report.

Context of the Study

In this section, the context in which the current study took place is described. First, the importance of reading literacy is discussed. Second, the designation of schools as disadvantaged is considered. Third, previous research on the reading achievements of disadvantaged pupils is reviewed. Fourth, current interventions designed to tackle educational disadvantage in schools are considered. Fifth, NAPS targets for reading literacy are considered. Finally, the Terms of Reference for the current study are examined.

Importance of Reading Literacy

Reading literacy underpins an individual's ability to function in the society in which he or she lives. The Organisation for Economic Cooperation and Development (OECD) (1999) defines reading literacy as 'understanding, using and reflecting on written texts, in order to achieve one's goals, to develop one's knowledge and potential, and to participate in society' (p.20). Thus, reading literacy is not simply the ability to decode a piece of text, but also relates to how an individual can complete a broad range of tasks in the home, at work, and in the community. In advanced or knowledge-based societies, basic reading literacy can be viewed as essential to functioning in adult life.

Not all who attend school achieve adequate levels of literacy. While there are many reasons why an individual may experience literacy difficulties as a child and in adult life, there is a clear association between educational disadvantage (or socioeconomic status, a central component of educational disadvantage) and literacy achievement. The fact that children from lower socio-economic homes tend to be over-represented among those with reading difficulties is long established (see, for example, Douglas (1964), Thorndike (1973), White's 1982 meta-analysis, or more recently, the results of the PISA [Programme for International Student Assessment] survey of 15-year olds (OECD, 2001)). Paradoxically, while schooling can represent a particularly important influence on the educational chances of children whose home circumstances may not be conducive to the development of literacy skills, lack of literacy skills may prevent such children from

benefiting from instruction across a range of school subjects in which basic skills in reading and writing are important prerequisites (Alexander & Entwistle, 1996).

There is strong evidence of the detrimental effects of low literacy levels on the life chances of individuals, with such effects often persisting into adulthood. In a report on the International Adult Literacy Survey in Ireland, low literacy levels were associated with early school leaving, low-paid employment, unemployment, and lower rates of uptake of adult education/training (Morgan, Hickey, Kellaghan, Cronin & Millar 1997). In a more recent study of literacy levels in Irish prisons, Morgan and Kett (2003) found that 52% of adults in the prison system had low literacy skills, compared to 23% in the general population. While Morgan and Kett are careful to point out that there is no simple relationship between low literacy levels and other outcomes, they conclude that poor literacy restricts a range of life-choices (particularly employment), and thus can become a predisposing factor in anti-social activities.

Given the importance of literacy for one's life chances, it is not surprising that recent government initiatives to address poverty and social exclusion include the improvement of literacy levels among children in primary schools.

The Disadvantaged Areas Scheme

Since the focus of the current study is on the reading achievement of pupils in designated disadvantaged primary schools, some background on the Disadvantaged Areas Scheme, and its successor, Giving Children an Even Break, are given here.

In 1984, the Department of Education introduced a set of measures to address the problem of disadvantage in selected primary schools in Dublin, Cork and Limerick. This additional provision, which later became known as the Scheme of Assistance to Schools in Designated Areas of Disadvantage (or, more recently, the Disadvantaged Areas Scheme), initially included increased capitation grants for participating schools, as well as grants for home-school activities. When the scheme was extended to other cities and towns, participating schools also became eligible for concessionary teaching posts. In 1990, specific indicators to assist in the identification of schools were introduced. These were the number of pupils in a school whose families were resident in local authority housing or non-permanent accommodation, held medical cards, and were in receipt of unemployment benefit or assistance under schemes administered by the Department of Social Welfare. No schools have been admitted to the Designated Areas Scheme since 1996/97. In 2001, the scheme was subsumed into the Giving Children an Even Break (GCEB) initiative.

The GCEB initiative provides additional funding and support for disadvantaged pupils in 2350 schools, including most of the schools in the Designated Areas Scheme. The 242 urban schools in GCEB with the highest concentration of disadvantaged pupils receive staff allocations that enable them to implement a maximum class size of 20:1 in Junior classes (unless they already have a 15:1 ratio under the Breaking the Cycle Scheme), and 27:1 in Senior classes. Most rural schools in the scheme are clustered into groups of 5 and have the services of a co-ordinator. GCEB represents a new approach to allocating resources to address disadvantage, since the degree of intervention is based on the number of disadvantaged pupils in a school, and covers a much broader range of schools than any of the earlier interventions. Nonetheless, all schools included in the Designated Areas Scheme retained their designated disadvantaged status. Thus, in 2002/03, 314 primary schools remained designated disadvantaged schools.

Reading Standards and Disadvantage

A number of Irish studies have found that pupils attending primary schools with a high proportion of disadvantaged pupils, or schools designated as disadvantaged, have significantly lower average reading achievement scores than their counterparts in non-designated schools or in standardization samples (e.g., Archer & O'Flaherty, 1991; Cosgrove, Kellaghan, Forde & Morgan, 2000; Hayes & Kernan, 2001; McDonald, 1998; Weir & Eivers, 1998; Weir, Milis & Ryan, 2002). A recent review concluded that pupils from designated disadvantaged schools had average reading scores that were between one half to one full standard deviation below national mean scores, with pupils in schools

with the highest concentrations of disadvantage performing more poorly than pupils in disadvantaged schools in general (Weir, 2001). Furthermore, the gap between pupils attending designated schools and those in national norm groups increased with grade level. In an earlier Irish study, Martin (1979) also found evidence of a widening achievement gap in reading between higher and lower SES pupils during primary schooling, though the increments of deficit tended to be small.

The achievement of pupils in disadvantaged schools may be poorer than the data suggest. For example, in the evaluation of the Breaking the Cycle scheme (see next subsection), just over 4% of pupils were excluded from testing by their teachers, while a further quarter of Sixth class pupils were absent for the administration of at least some of the subtests (Weir et al., 2002). The former were excluded because their teachers believed they would have been unable to complete the test battery, while the subtest scores of pupils in the latter group who had completed part of the tests were significantly poorer than those who had completed all of the tests. Thus, it seems reasonable to assume that, had both groups been included, average achievement among Breaking the Cycle pupils would have been even poorer than that reported. Issues of exclusion and non-attendance are likely to affect other surveys of reading achievement, suggesting that, in general, the true gap between pupils in designated and non-designated disadvantaged schools may be larger than that reported.

A particularly worrying aspect of Weir's (2001) review is the conclusion that standards in the most disadvantaged schools may have declined in recent years. In support of this, she cites significant declines in achievement between the 1993 and 1998 National Assessments of English Reading among pupils in Fifth class whose parents held medical cards (see Cosgrove et al., 2000), and between 1997 and 2000 among pupils assessed in the Breaking the Cycle scheme (see Weir, Millis & Ryan, 2002). Weir also notes that a greater percentage of pupils in Sixth class achieved very low reading scores, and a smaller percentage achieved very high scores in Breaking the Cycle schools in 2000, compared to the percentages reported by Archer and O'Flaherty (1991) for a study conducted in a similar sample of schools in 1983.

There is also some evidence of poor performance in reading among students attending designated disadvantaged post-primary schools in Ireland. In PISA 2000, pupils in such schools achieved a mean score on a combined reading literacy scale that was one-half of a standard deviation below the mean score of students in non-designated schools (Shiel, Cosgrove, Sofroniou & Kelly, 2001). Furthermore, in a hierarchical linear model of reading literacy based on the Irish PISA 2000 data, the parameter estimate for school disadvantaged status was just under one-quarter of a standard deviation, after adjustments had been made for the effects of other school and individual variables, including individual socioeconomic status.

One difficulty with the studies cited here is that none set out to provide a description of the reading achievements of pupils in a broad range of disadvantaged schools. Studies involving Breaking the Cycle schools focus on a subset of designated schools (the most disadvantaged), while studies based on test standardisation samples and national and international studies typically do not sample a sufficiently large number of disadvantaged schools to allow for precise estimates of performance, particularly at the extremities of achievement distributions. The current study attempts to address these shortcomings.

Other Irish School-based Interventions to Address Disadvantage

There has been a number of other initiatives designed to improve disadvantaged children's academic achievement in Irish primary schools in recent years. Two such initiatives, the Scheme of Assistance to Schools in Designated Areas of Disadvantage, and Giving Children an Early Break, have been discussed already. This section describes three intervention schemes – Early Start, the Home-School-Community Liaison (HSCL) Scheme and Breaking the Cycle – and looks at the Learning-Support Service as it impacts on schools with high levels of disadvantage.

Early Start, a pre-school half-day programme for 3-year olds in areas of educational disadvantage, was established on a pilot basis in 1994. The programme, which is currently in operation in 40 centres (all located in schools), has both an educational focus (emphasising the

development of language and cognition), and a focus on development of the whole child. Like the earlier Rutland Street Project on which it is partially modelled (see Holland, 1979; Kellaghan, 1977), a key element of the programme is the involvement of parents. While Early Start has been reported to have had positive effects on pupils' social and emotional maturity, their adaptation to classroom procedures and their self-determination and independence (Educational Research Centre, 1998), its effects on reading and mathematics achievement have been disappointing (Kelly & Kellaghan, 1999). Aspects of Early Start that had been identified as problematic in the early stages of implementation, including insufficient emphasis on cognitive development in the Early Start curriculum, inadequate in-career development, absence of curricular guidelines, and low levels of adult-child interaction, have begun to be addressed (Lewis & Archer, 2002; 2003), and a system for profiling pupil achievement has been implemented. Nevertheless, concerns about aspects of the programme remain, including the short (daily) duration of the programme, its relatively weak intensity and poor attendance rates. Moreover, Lewis and Archer (2003) observed that 'in the core aspects of language and cognitive development . . . the progress of the children observed reflects standards that are more consistent with beginning-of-year than with end-of-year objectives' (p. 16).

The HSCL Scheme was implemented in 55 designated primary schools in 1990, and has since been extended to all designated schools at primary and post-primary levels. Its main aim is to counteract disadvantage by increasing co-operation between schools, parents, and other community agencies in the education of young people. It also includes the aim of enhancing children's uptake from education. A HSCL co-ordinator (teacher) in each school has primary responsibility for achieving the scheme's aims. An evaluation of the scheme in the first three years showed that up to two-thirds of co-ordinators' time was spent working with parents, either in school or at home (Ryan, 1994). Data on reading achievement were obtained in the First, Third and Fifth classes in six schools at the start of the scheme in 1990, and again in 1995. In 1995, pupils in the First and Third classes had significantly higher mean scores on standardised tests of reading than their predecessors in 1990 who had not benefited from the programme, while pupils in Fifth class had significantly lower scores (Ryan, 1999) – a finding that may be related to the stronger focus on working with parents of pupils in the Junior classes than in the Senior classes. A recent review of the HSCL scheme by Archer and Shortt (2003) recommended greater involvement of the most needy parents in activities related to the scheme and suggested that co-ordinators become more heavily involved in work designed to stimulate children's learning in the home, including language development. Most significantly, in the context of the current study, the review suggested that specific targets for the scheme be established in a number of areas, including reading literacy.

The Breaking the Cycle programme was introduced into 33 urban and 123 rural schools in 1996/97. Schools were selected based on very high levels of disadvantage among their enrolments (slightly different criteria were used for urban and rural schools). Schools in the scheme were given additional in-career development programmes for teachers, as well as increased funding and capitation, allowing purchase of additional materials and resources. Urban schools received extra teaching staff in order to create a 15:1 pupil-teacher ratio in the Junior classes, while rural schools benefited from the services of a co-ordinator, shared with a small number of neighbouring schools. An evaluation of the first five years of Breaking the Cycle (urban) found that while principals and teachers saw many benefits accruing from participation in the scheme, there was no significant improvement in pupils' reading achievements as measured by standardised tests (Weir et al., 2002). This was despite the fact that a majority of principals cited English as their main curriculum priority in 2001. Supporting Archer and Shortt's comments about the relatively low priority given to language development in the HSCL scheme, Weir et al noted that rather than prioritising English, there was a slight reduction in the time spent teaching English. They also queried if the 15:1 ratio in Junior classes had resulted in a shift to teaching practices more appropriate to small group settings. Breaking the Cycle is now subsumed into the GCEB programme.

The Learning-Support (formerly Remedial Education) service, which is intended to provide additional support to pupils with very low achievements in reading and/or mathematics, extends to all primary schools, including those designated as disadvantaged. In 2003/04, 1530 teachers had full-time learning-support duties. Although, historically, access to services has been greater in designated

than in non-designated schools (Kellaghan, Weir, Ó hUallacháin & Morgan, 1995), some anomalies in the operation of the service have been observed. For example, Shiel, Morgan and Larney (1998) found very little difference between designated and non-designated schools in the proportion of pupils in receipt of learning-support, despite principals in designated schools estimating that almost 20% of their pupils needed support, compared to an estimate of 11.5% by principals in non-designated schools. Shiel et al. also observed that, while pupils in receipt of learning-support in English in non-designated schools made significant average progress in reading (as measured by a standardised test) over a two-year period, pupils in receipt of such teaching in designated schools did not improve significantly.

Some recent changes in the Learning-Support service may affect the quantity and quality of provision for pupils in designated schools. First, principal teachers and learning-support teachers have received training in implementing the new *Learning-Support Guidelines* (Department of Education and Science, 2000), which include recommendations on prioritising the selection of pupils for intervention, and on establishing links between school and the homes of pupils in receipt of learning-support. The implementation of several recommendations in the *Guidelines* is examined in the current study. Second, Reading Recovery, a school-based early intervention programme for at-risk readers that involves 1-1 tutoring, was implemented with pupils in Senior Infants in 41 schools in Monaghan and 25 schools in Dublin in 2003-04. An initial evaluation of the programme in Monaghan (Murtagh & Ní Threasaigh, n.d.), suggests that, at least in non-designated schools, it is effective in bringing the achievement of individual pupils up to the average level of their class. However, longitudinal research would be required to ascertain if the benefits persist, and indeed if there are ways in which schools can work to preserve achieved gains. As the Dublin schools in which Reading Recovery is offered are all designated disadvantaged, the short- and long-term effects of the Dublin programme on pupils' reading would be of particular relevance to future policy development in the area of learning-support. However, no data on these issues have been published to date. Third, in June 2004, the Department of Education and Science indicated to schools that it intended to implement a new approach to allocating resources for pupils with learning difficulties (DES, Circular SP ED 09/04). Under the approach, the most disadvantaged schools (those categorised as 'Urban' in GCEB) will be allocated one teacher of children with special education needs for every 80 pupils, including those with high-incidence special education needs (such as general learning disability) or learning-support needs in English and/or mathematics. It is unclear at this time whether implementation of this new system will result in enhanced or reduced access to services for pupils currently in receipt of additional support in designated schools.

Finally, although not all designated schools are involved in all of the initiatives reviewed here, many have access to a broad range of programmes. This suggests that the ways in which programmes are co-ordinated and integrated within schools may be as important as any individual scheme in impacting on pupils' performance in reading.

National Anti-Poverty Strategy Targets for Reading Literacy

At the UN World Summit in Copenhagen in March, 1995, the Irish Government endorsed a programme of action aimed at eliminating absolute poverty and reducing overall poverty and inequalities everywhere. In *Sharing in Progress* (National Anti-Poverty Strategy, 1997), the Government outlined a national plan of action that would be implemented by government departments in pursuit of these aims. The importance of reading literacy is recognised through the inclusion of the following target: 'having regard to the assessment of their intrinsic abilities, there are no students with serious literacy and numeracy problems in early primary education within the next five years' (p. 9). Neither the strategy document, nor the earlier White Paper, *Charting our Education Future* (Ireland, 1995), which included the same target, specified what was meant by 'serious literacy problems', nor did *Sharing in Progress* clarify if the target was intended to apply to schools in general, or to schools designated as disadvantaged.

In *Building an Inclusive Society: Review of the National Anti-Poverty Strategy* (National Anti-Poverty Strategy, 2002), a new target of 'halving the proportion of pupils with serious reading

difficulties by 2006' (p. 12) was set out. According to Kellaghan (2002), this target is problematic because it 'fails to specify the present proportion, the age or grade levels of the pupils being targeted, or how we are to know if the target has been achieved' (p. 25). Kellaghan also points out that this target does not specify a particular group and that it could be achieved without having much impact on pupils in disadvantaged situations. Although some of Kellaghan's criticisms about targeting had been anticipated in Goodbody Economic Consultant's earlier (2001) NAPS framework document, *Review of the National Anti-Poverty Strategy,* which proposed a target of 'halving the proportion of pupils in designated disadvantaged schools with serious literacy difficulties by 2006', the current *National Action Plan against Poverty and Social Exclusion* (National Anti-Poverty Strategy, 2003) re-iterates the 2002 target in which no target group is mentioned, perhaps because GCEB had subsumed the Designated Areas Scheme in 2001.

A second problem with the NAPS targets for literacy concerns what is meant by terms such as 'reading difficulties' and 'serious reading difficulties', as these terms have not been explicitly defined in relation to the targets. The initial (1997) literacy target of eliminating reading difficulties within five years acknowledged that the target might not be reached in the case of children with low 'assessed intrinsic abilities'. It seems clear, however, since the publication of the *Report of the Special Education Review Committee* (Department of Education, 1993), that the 10th percentile on standardised norm-referenced tests of reading is viewed by the Department as a cut-off point that differentiates between children who have a reading difficulty (those achieving scores at or below the 10th percentile) and those who do not (those achieving scores above the10th percentile). There has been relatively little debate on the appropriateness of the 10th percentile as a cut-off point, although this may be more problematic when applied at the individual level (where, because of measurement error, there may be no real difference between the achievement of, for example, a pupil scoring at the 9th percentile, and one scoring at the 12th) than at the group or aggregate level. Another potential difficulty is that currently available reading tests may yield different proportions of pupils achieving at or below the 10th percentile.

Thirdly, achievement of the 1997 target would have entailed moving 10% of pupils with the lowest reading achievement scores to the next decile on an achievement scale, while ensuring that no pupils at higher deciles regressed in their achievement. International research suggests that such a target might be impossible to achieve. In the 2000 PISA survey, for example, high-performing countries with narrow ranges in achievement (Finland and Korea) had 6-7% of their 15-year olds scoring at Level 1 or below (i.e., below the 10th percentile for Irish students) on the combined reading literacy scale. This also suggests that the 2002 NAPS target of halving the proportion of children with 'serious reading difficulties' would be very difficult to achieve, whether the target is interpreted as referring to the general population of primary school children or to children enrolled in designated schools only.

A fourth difficulty is that the time frames specified in the NAPS literacy targets are unrealistic. Clearly, the 1997 target, with a five-year time frame for the elimination of reading difficulties, has not been achieved. The 2001 and 2002 NAPS targets, which refer to halving the proportion of children with serious reading difficulties (in designated schools and in all schools, respectively) by 2006, are also extremely ambitious, given that just two school years remain in which to achieve the them. In comparison, the United States government, through its No Child Left Behind legislation, has given 12 years to states and school systems to achieve a broadly similar target – that all children will be reading at 'proficient level' on state tests by the 2013-2014 school year. The absence of intermediate targets, and of specific school-level strategies and targets for achieving those targets, also militates against achievement of the NAPS targets.

Finally, it is significant that the NAPS targets refer only to pupils with reading difficulties (operationally defined as those with low test scores). The specification of additional targets relating to average, and/or high levels of reading achievement might also be helpful in raising reading standards among all pupils in designated schools.

Terms of Reference

Arising from the targets for reading literacy in the National Anti-Poverty Strategy, the Department of Education and Science asked the Educational Research Centre in June 2002 to conduct a study of reading standards in designated disadvantaged schools. The Terms of Reference (ToR) for the study were to:

1. obtain baseline data on the reading achievement of pupils in First, Third and Sixth classes in a representative sample of schools in the Scheme of Assistance to Schools in Designated Areas of Disadvantage, using an appropriate reading test;

2. identify variables associated with the reading achievement of pupils in designated disadvantaged schools;

3. make recommendations that would facilitate the Department and designated disadvantaged schools in reaching the targets for reading literacy specified in the National Anti-Poverty Strategy.

The ToR specify pupils in the First, Third and Sixth classes in designated schools as the target groups in the study. Reference to designated schools is significant since the Designated Areas Scheme had been subsumed into GCEB in 2001, and the selection of schools could have focused instead on disadvantaged urban schools in GCEB.

Because individual pupil ability can fluctuate during the early school years, it is unusual to conduct large-scale assessments of pupils in First class. However, information on pupil performance at this level can provide insights into pupils' acquisition of basic reading skills. Further, the ERC's work in developing standardised tests suggested that pupils in the latter half of First class could attempt a test, and that concerns about the interpretation of scores would be greater at the individual level than at the aggregate level. In other words, while *individual* fluctuations might preclude drawing strong conclusions about a particular pupil's reading achievement, the data could be used to describe the achievements of a *group* of pupils. Third class was selected because, for many pupils, it represents an important transition between learning basic reading skills and beginning to apply those skills to longer texts. Sixth class was chosen as performance at that level might provide insights into the preparedness of pupils for dealing with the reading demands of post-primary schooling.

The ToR also indicated that an appropriate test of reading achievement be administered to pupils. One well-known test, the *Drumcondra Primary Reading Test* (DPRT) (Educational Research Centre, 1994, 1995) was ruled out because some schools and pupils might be over-familiar with its content. A second test, the *Tasks for the Assessment of Reading Achievement* (TARA) test, which has been administered in conjunction with regular national assessments in Fifth class since 1993, was another possibility. However, TARA is not targeted at any of the class levels in the current study, although a new version was in preparation for a national assessment of pupils in First class in 2004. A third test, the *Drumcondra Sentence Reading Test* (DSRT), was also considered. Unlike the DPRT or TARA, the DSRT does not allow for examination of specific aspects of reading, such as vocabulary and reading comprehension. However, it has up-to-date (May, 2002) national norms for First through Sixth classes, it is short and relatively simple to administer, and it is not familiar to schools or pupils. Given these advantages, and the lack of time to develop a test specifically for the survey, the DSRT was selected.

Some consideration was given to integrating the current study into the National Assessment of English Reading (NAER), which it was intended to implement in a nationally representative sample of schools in First and Fifth classes in 2004. However, differences in time lines and target class levels between NAER and the current study meant that it was not possible to do so on this occasion. The possibility of broadening NAER to monitor achievement in designated schools could be considered in the future, when more time is available for planning and preparation.

The identification of variables associated with the reading literacy performance of pupils in designated schools was also mentioned in the ToR. The current study builds on the findings of earlier international and national assessments of reading, and of other relevant studies by examining

the effects of a range of school- and pupil-level variables on achievement. It also attempts to extend earlier findings by looking at the impact of selected school- and pupil-level variables on achievement while adjusting for the effects of other variables, using hierarchical multilevel modelling. It should be noted that even stronger conclusions about the effects of a range of variables on reading achievement could be drawn if progress scores were available for the same pupils at two or three different points in time.

Lastly, the ToR referred to the development of recommendations to facilitate reaching the targets for reading literacy specified in the National Anti-Poverty Strategy. While it was agreed that a set of recommendations could emerge from the study, the research team expressed doubts as to whether the recommendations could be implemented by 2006, and, even if they could, whether there would be sufficient time for them to have an effect on achievement at the system level in such a short period of time.

The Development of Reading Ability

The purpose of this section is to provide an overview of reading as it develops before formal schooling begins and in the early years of schooling. This information provides a perspective with which to interpret the performance of pupils in the current study. First, important precursors of reading are considered. Then the stages in the development of early reading are examined.

Prerequisites for Reading

This subsection outlines some important prerequisites of early reading development, including oral language, concepts about print, and phonological/phonemic awareness. It should be noted that these are proximal to reading. Physiological factors such hearing and vision, and psychological factors such as general cognitive ability, though not specific to reading, are also relevant for learning to read, and problems in any of these areas could impair development.

Researchers and practitioners have, for many years, known how reading development relies on children's oral language proficiency. According to Tough (1977), children's knowledge of language, their understanding of its communicative function, and their orientation towards particular kinds of language (such as the language found in books) are major determinants of their ability to achieve in school. The *Primary School Curriculum: English (Teacher Guidelines)* (NCCA, 1999a) recognises a link between oral language and reading, and recommend that a child's oral language competence be 'well-developed' before the introduction of a formal reading scheme.

Heath (1983) believes that the higher-order language skills associated with reading, including understanding of word meanings and comprehension of text, can be transmitted orally in the context of daily interactions between adults and children. Watson (2002) observes that, in interactions with parents that involve language, children typically move from simply naming objects to asking questions, interpreting, defining, explaining, considering missing objects, and describing past events – discourse activities that are centred around 'signification and interpretation rather than enactment or experience' (p. 50), and, as such, reflect the requirements of subsequent text-based reading. According to Snow, Burns and Griffin (1998), 'decreased reliance on the immediate context as a support for communication is a developmental accomplishment that may ease the transition to school, where decontextualised language is highly valued' (p. 49). The corollary of this is that, for some children, the language interactions of the home may not provide opportunities to develop decontextualised language, and so some form of early intervention or support may be needed. Ideally, such support would begin well before the start of formal schooling.

A second prerequisite for early reading development is knowledge of 'concepts about print' (Clay, 1991). These concepts include an awareness that: print carries a message; there is a one-to-one correspondence between words read and printed text; there are conventions of print such as directionality (left to right, top to bottom); there are differences between upper- and lower-case letters; punctuation marks serve important purposes; and books have some common characteristics

(e.g., author, title, front/back). Purcell-Gates (1996) found that print knowledge of children in low-SES families was significantly related to the frequencies with which parents focused their children on print (e.g., letters, letter patterns and words) during such activities as writing greeting cards, reading stories, or helping their children to learn their names or individual letters. Joint reading of texts by parents and children during the pre-school years and the early years of schooling, as well as shared reading of texts by teachers and pupils, appear critical for developing concepts about print.

A third prerequisite for reading is phonological awareness. Beginning readers need an awareness that spoken language can be analyzed into strings of separable words, and that words, in turn, can be analyzed into sequences of syllables, onsets and rimes, and phonemes within syllables. Phonemic awareness is a special case of phonological awareness that involves the ability to segment syllables or words into their constituent phonemes. While phonemic awareness initially emerges as an ability to identify alliteration and rhyming words at 3-4 years of age, the insight that every word can be conceived as a sequence of phonemes does not emerge in most children until 5-6 years of age. Some phonemic awareness is necessary for learning to read an alphabetic script such as English, and indeed can be taught using an appropriate training programme, preferably one that uses letters (see US National Reading Panel, 2000). Reading instruction that directs children to the links between letters and phonemes (for example, phonics instruction) seems to facilitate further growth in phonemic awareness (Snow et al., 1998) and points to a reciprocal relationship between phonemic awareness and early reading development.

The development of phonemic awareness in young children has been linked to performance on a range of oral language measures, including vocabulary size. According to Roth et al. (2002), children with limited oral vocabularies may also be limited in their ability to develop phonemic awareness for spoken words because they have an insufficient pool of words to reflect on and analyze during this critical phase of learning.

Stages of Reading Development

Research on children's reading development underlines the importance of the early years for developing reading proficiency, and suggests that if children are not properly prepared to enter the psychologically critical period for developing word identification skills and reading fluency (5-8 years of age), they may find it very difficult to make up lost ground later on (Adams, 1990). Ehri (1995) has identified four main phases in the development of early reading skills, illustrating how the prerequisites for reading discussed above are associated with growth in reading development.

The *pre-alphabetic phase* (ages 3-5 years) is associated with developing concepts about print and rudimentary associations between letters and words. Much of the 'data' that emergent readers need to draw on in this phase can be acquired during informal interactions with print, including story reading with parents or other adults, informal writing, and talking about print. It is during the *partial alphabetic phase* (5-6 years) that children begin to develop strategies for recognising words, often focusing on initial (onset) and final letters as the key clues. Some level of phonemic awareness is important at this stage as children need to segment oral words to identify their initial and final sounds. Letter-name knowledge is also important, as children use the sounds associated with initial and final letters to identify words. Children who are slow to develop phonemic awareness or have limited letter-name knowledge may struggle at this stage.

In the *full alphabetic phase* (6-8 years), beginning readers remember how to identify words by 'forming complete connections between letters seen in written forms of words and phonemes detected in pronunciations' (Ehri, 1995, p. 120). Successful reading now hinges on the ability to segment all the sounds in spoken words into their constituent phonemes, knowledge of letter-sound correspondences, and ability to blend sounds to form words. Juel (1991) has argued that exposure to texts in which the majority of the words contain consistent letter-sound correspondences can assist some children in developing letter-sound correspondences. A feature of this phase is an over-reliance by less-able readers on sentence context to identify unknown words (Stanovich, 1986).

The *consolidated alphabetic phase* (8+ years) requires readers who have encountered many different words in their reading to consolidate connections between recurring letter patterns. This allows readers to operate with multi-letter units that may be morphemes (e.g., -est, -tion, -ing) or syllables. In this phase, children grow in their ability to recognise words automatically, without having to think consciously about word structure or spelling patterns. Developing reading fluency is an important instructional goal associated with this phase (US National Reading Panel, 2000).

As word identification skills become automatic, attention shifts from learning to read to reading to learn. From Third class onwards, children may encounter more complex texts, not only in their English books, but also across a range of texts in different subject areas. Background knowledge (about different topics), vocabulary knowledge (word meanings), and knowledge of text structures become increasingly important as children are required to make ever more complex inferences. Metacognitive knowledge (the ability to monitor one's reading comprehension processes) also begins to play a role, as readers 'take control of' their reading processes and apply various 'fix-up' strategies if comprehension is impeded. Clearly, the development of a knowledge base for reading comprehension cannot be put on hold until children have moved through the early phases of reading acquisition. Schools, teachers and parents need to begin preparing children from an early age for the transition from learning to read to reading to learn.

Home and Community Characteristics and Reading

Socioeconomic status (SES), which may encompass each or all of household income, occupation, and parental (particularly maternal) education, has been consistently associated with reading achievement. In Ireland, the 1998 NAER survey found that family medical card possession (a broad index of low household income) was associated with lower mean reading scores among pupils in Fifth class, and higher parental education was associated with higher mean reading achievement scores (Cosgrove et al., 2000). Similarly, in PISA 2000, Irish 15-year olds with 'high SES' parents had significantly higher mean scores in reading than 15-year olds whose parents were classified as 'low SES', even after adjustments had been made for other relevant variables (Shiel et al., 2001). In the same study, the estimated contribution of SES to the reading scores of 'high SES' pupils was one-quarter of a standard deviation, while for 'low SES' pupils, it was just one-thirtieth. However, as White (1982) concluded in his meta-analysis of the relation between socioeconomic status and achievement, correlations between traditional measures of SES (such as parental education or occupation) and achievement, particularly at the individual level, tend to be weak (averaging $r = .22$), whereas correlations between variables that describe the ethos and teaching style of families ('home atmosphere' variables) and achievement are considerably stronger (averaging $r = .55$).

The term 'cultural capital' has been used to conceptualise the influences of families, and the communities in which they are embedded, on children's academic development. According to Kellaghan (2001), it exists in three forms: in cognitive and non-cognitive competencies derived from past experiences (particularly familial ones), which actively organise future experience; in an objectified state in cultural goods (pictures, books, instruments); and in an institutionalised state (educational qualifications). Language is viewed as constituting an important part of the cognitive dimension of cultural capital since, in addition to being a means of communication, it provides together with a richer or poorer vocabulary, a system of categories that enables one to decipher and manipulate complex logical and aesthetic structures (Bourdieu, 1986). Kellaghan (2001) identifies a number of behaviours and conditions in the family that contribute to cultural capital, including: modelling (in use of complex language; in planning and organisation to ensure that space is well structured and used; intellectual-cultural orientation in activities; and moral-religious emphasis); providing motivation and reinforcement (encouraging and rewarding school-related activities and independence in decision making); holding high academic aspirations and expectations; providing direct instruction (guiding and supporting academic work; helping with homework); and ensuring that the activities engaged in are developmentally appropriate.

A home environment where reading materials are readily available, where parents read to or with their children from an early age, and where there is a high level of verbal interaction is more

likely to facilitate reading development than a home environment where such features are absent (e.g., Hess & Holloway, 1984), possibly because such an environment develops the cultural capital that is favoured by schools. However, the relationship between some home atmosphere variables and achievement is complex. For example, although the number of books in a child's home has an effect on reading achievement, even after adjusting for other related variables such as SES (Shiel et al., 2001), it is unclear why or how the availability of books impacts on achievement (although one might hypothesise that homes in which there is a large number of books are characterised by frequent discussions around books). Notwithstanding such complexity, however, there is growing evidence that *how* parents interact with their children can matter more than *who* parents are (in terms of education, income or SES) (Kellaghan, Sloane, Alvarez, & Bloom, 1993; Snow, Barnes, Chandler, Goodman, & Hemphill, 1991; Teale, 1986).

A corollary of the considerable emphasis that research has placed on the role of home environment in the development of literacy is that the contribution of children themselves to the home environment has been somewhat overlooked – 'it is easy to lose sight of the fact that children influence their parents as well as parents their children' (Kellaghan et al., 1993, p. 60). For example, as Hanson (1975) found, when parents read to their children, some children appear to enjoy and to want to prolong the reading, while others may pay little or no attention. Thus, although home background factors are important, they are to a certain extent mediated by the characteristics of the individual child. Another home variable that affects achievement is parents' own literacy levels. Parents who have reading difficulties are more likely than those who do not to have children with reading difficulties (Scarborough, 1998), perhaps because such parents cannot support their children in ways that help them to become literate.

In addition to the individual effects of home factors, it has been shown that the community in which a child lives can have an effect on his/her achievement. For example, Garner and Raudenbush (1991) found that area-based deprivation scores for Scotland were negatively associated with educational achievement at age 12, even after controlling for pupil ability, family background and schools. However, where community effects have been found, they have accounted for only a relatively small proportion of variance in individual learning outcomes, with family background having a much stronger effect (Gibbons, 2002).

Family Literacy and Family Support Programmes

The importance of the home environment in the formation of children's early language and literacy skills is recognised through the implementation of programmes that establish links between home and school, such as the HSCL scheme, and in family learning or family literacy programmes. The federally-funded Even Start family literacy programme in the United States, which targets at-risk children and their families, includes home visits where teachers teach and model ways to develop parents' self-sufficiency and children's developmental and learning skills, as well as visits by social workers. Even Start also provides joint sessions for adults and children, in which activities such as developing reading readiness, joint story telling, working with numbers, and asking children questions to stimulate thinking and promote verbal problem solving are covered. A national evaluation of Even Start (St. Pierre, Swartz, Gamse, Murray, Deck & Nickel, 1995) showed that the vocabulary of Even Start children (ages 3-5 years) whose parents had a substantial amount of parenting education increased significantly over children in the programme whose parents did not receive the same level of parenting education. Further, the effects of direct instruction of parents in how to support their children's literacy gains were positive. However, home-based activities were less successful than centre-based ones in promoting learning gains. Although no direct relationship was found between parents' literacy gains and children's scores for school readiness or literacy skills, it was concluded that Even Start has had positive effects for parents and their children.

In Ireland, the Clare Family Learning Programme has been in place since 1994 and concerns itself not only with developing the literacy skills of parents from disadvantaged backgrounds and their children, but also encourages the involvement of parents in their children's education at an early age. More recently, the National Adult Literacy Agency (NALA) has been involved in the

dissemination of good practice about family learning and family literacy. However, while about one half of VEC schemes for adult literacy now have family literacy programmes (NALA, 2004), relatively little is known about their nature and effectiveness, or how they interact with existing school-based initiatives such as the HSCL scheme, which has some of the same goals.

It is now recognised in Ireland and elsewhere that some family-based interventions need to go beyond the provision of literacy skills for adults and children if they are to have an impact on children's life chances. In evaluating the effects of Springboard (an Irish multi-agency support initiative for families with functional problems in disadvantaged areas funded by the Department of Health and Children), McKeown, Hasse and Pratschke (2001) noted the intractable intergenerational nature of the problems experienced by dysfunctional families. Although the evaluators observed that Springboard has some positive psychological effects on both the parents and children of participating families, the school attendance of children, which was low at the outset of the evaluation, did not improve. Springboard is of relevance here in that it demonstrates how an integrated, multi-agency approach may be required to address the needs of parents and children in the most at-risk families in disadvantaged areas, but that, even then, educational issues such as school attendance may require considerable additional input, both from schools themselves and from other agencies.

Schools Characteristics and Reading

While it is recognised that performance in reading is associated with a number of variables outside the direct control of schools (such as parent income or parent literacy levels), there is nevertheless considerable interest in the extent to which schools can address the needs of lower-achieving pupils, including pupils who are disadvantaged. Attempts by schools to improve the performance of disadvantaged pupils is, of course, complicated by the fact that such pupils generally cluster together in the same schools, creating a 'school context' effect that, for individuals, combines with the effect of socioeconomic status (though international research suggests that the school context effect is not as strong in Ireland as in most other European countries (OECD, 2001)). School effectiveness research, if it controls for pupils' initial achievement and links school processes and resources to gains in achievement, is one source of evidence that suggests that schools can ameliorate the effects of disadvantage. This section summarises key outcomes from the literature as they relate to performance gains in a number of subjects including reading, and looks at the characteristics of school-wide interventions that aim to enhance the reading achievement of schools with large numbers of at-risk pupils. Research on school effectiveness and on restructuring schools is relevant to the current study in that it suggests questions that might be asked of principals and teachers in the School and Teacher Questionnaires, and provides a framework with which to interpret responses.

School Effectiveness Research

There is a considerable body of research about how school context variables relate to achievement. Two comprehensive reviews (Levine & Lezotte, 1990; Sammons, Hillman & Mortimore, 1995) found a number of similar features associated with effective schools[1]. At the 'whole school' level, such schools were characterized by good leadership, a productive school climate and culture with an orderly environment, an atmosphere of collegiality, and an emphasis on positive reinforcement. Parental involvement and school-based staff development were encouraged. Teachers in effective schools had high expectations for their students, frequently monitored their progress, and maximised instruction time. Their teaching practices were characterised by efficient classroom organisation, structured lessons that were prepared in advance, clarity when explaining the purpose of a lesson, and adaptation to the particular needs of their class. Furthermore, classroom variables such as the use of interesting texts, real-world learning, and pupil choice in reading matter were associated with increased pupil motivation and engagement, which in turn, affected reading achievement.

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[1] Most research on school effectiveness does not focus exclusively on literacy achievement, but it is not unreasonable to assume that schools that are generally effective are also effective regarding the literacy achievements of their intake.

The relationship between effective schools and improved achievement for disadvantaged pupils is not clear-cut, however. Thomas, Sammons, Mortimore and Smees (1997) examined how school effectiveness related to achievement (in a number of subject areas and total GCSE results) for groups of inner London students over a three-year period. They found that in less effective schools the gap between disadvantaged students (defined as those entitled to free school meals) and other students was smaller than average. In contrast, although effective schools boosted achievement for disadvantaged students, the gap between such students and their classmates widened.

The literature also suggests that what constitutes an effective school may vary depending on the socioeconomic composition of the school. Two studies of US elementary schools (Hallinger & Murphy, 1986; Teddlie & Stringfield, 1993) found that all effective schools shared certain characteristics (e.g., an orderly environment and frequent monitoring of pupil progress) but that there were important differences between low- and middle-SES effective schools. Both studies found that parental involvement in effective low-SES schools was limited, and that the focus of the curriculum in middle-SES effective schools was broader than in low-SES schools, where the curriculum emphasised the development of basic skills. Middle-SES effective schools promoted high present and future educational expectations, whereas their low-SES counterparts focussed only on present expectations (Teddlie & Stringfield, 1993). In effective low-SES schools, the source of expectations was the school, and expectations tended to be moderate. In contrast, in middle-SES schools, high expectations came from both the school and the home (Hallinger & Murphy, 1986). Principals in effective low-SES schools tended to be initiators of change, whereas in middle-SES schools they tended to be good managers (Teddlie & Stringfield, 1993). In low-SES schools they tended to have a high control of instruction, compared to low to moderate control in middle-SES schools (Hallinger & Murphy, 1986), although this may be related to Teddlie and Stringfield's finding that effective low-SES schools had less experienced teachers than middle-SES schools. Finally, Teddlie and Stringfield found that low-SES effective schools emphasised visible external academic rewards, while middle-SES schools did not. Teddlie, Stringfield and Reynolds (2000) suggest that part of the reason such differences are found may be because low-SES schools have to work to develop certain essential baseline conditions, such as high expectations, an orderly and safe school climate, and an academic 'press' that already exist in most middle-SES schools.

Research on effective schools that focuses specifically on reading achievement as an outcome indicates that a broadly similar set of variables is important for improving performance. According to Taylor, Pressley and Pearson (2002), these include a school-wide focus on improved pupil learning, strong school leadership, strong collaboration among staff, consistent use of data on pupil performance, a focus on professional development and innovation, and strong links to parents.

School-Wide Restructuring and Reading

A number of reports suggest that 'high-poverty schools' with low achievement should consider implementing school-wide restructuring programmes designed to accelerate reading achievement (Borman, Hewes, Overman & Brown, 2003; Taylor, Pearson, Clark & Walpole, 2002). Restructuring efforts typically focus both on school-wide organisation and on improved classroom reading instruction. Such efforts can be organic (where schools implement their own reform programme), or externally developed and supported (where a programme such as Success for All is brought in), or may involve a combination of organic and external approaches. Some researchers have argued that, despite the criticism that external reforms are sometimes prescriptive in nature, they tend to be implemented with greater fidelity, and therefore have stronger effects on teaching and learning than less clearly defined models (Nunnery, 1998). Snow et al. (1998) note that school-wide restructuring efforts that are coherent across classes tend to be more effective than disconnected strategies or restructuring focused on organisational issues that do not include school-wide curricular reform in language and literacy.

In a review of the international literature on intervention programmes designed to address disadvantage, Archer and Weir (2004) outline a broad range of programmes designed to address the learning needs of disadvantaged children. One of these programmes, Success for All (SFA) (e.g.,

Slavin & Madden, 2003), has been widely cited as an effective school-wide reform (e.g., Borman et al., 2003), and is referred to in the *Learning-Support Guidelines* (DES, 2000) as a model with which schools with large numbers of lower-achieving pupils might wish to become familiar. The organisational features of this programme include: regrouping, by reading performance levels, of pupils in Grades 1-6, for daily reading instruction; reduction in group size for reading because other staff members (e.g., support teachers) also take reading groups; allocation of 90 minutes per day to group instruction in reading; provision of 20 minutes of individual or small group tutoring for pupils with severe reading difficulties by support teachers/tutors, outside of reading group time; curriculum-based assessment of pupils every eight weeks, to determine who is to receive tutoring, to suggest adaptations to pupils' programmes, and to identify pupils who need other types of assistance; the provision of additional family interventions, including giving parents strategies to use with their children at home, through the activities of a Family Support Team; appointment of a programme facilitator to oversee (with the school principal) the operation and success of the programme, and co-ordinating the activities of the Family Support Team; provision of three days of in-service training at the beginning of the school year for the first three years of programme implementation, with classroom follow up, coaching, and formal group discussion provided during the school year. SFA also advocates a concerted effort to keep pupils with learning problems out of special education if at all possible, and to serve those who do qualify for special education in a way that does not disrupt their regular classroom experiences.

SFA shows how a number of elements drawn from the literature on effective schools, including regular monitoring of pupil achievement and the provision of adequate in-career development of teachers, can be combined with organisational changes at school level to ensure a strong focus on developing children's reading ability. The programme also suggests that effective school restructuring requires attention to a broad number of areas, and that the input of a co-ordinator may be necessary to support teachers in implementing the programme. SFA is important to the extent that it suggests ways in which an intervention might be organised to benefit all pupils in a school, rather than addressing only the needs of pupils who qualify for additional support.

The allocation of 90 minutes per day to English in Success for All, and an additional 20 minutes per day of one-to-one tutoring to pupils with serious reading difficulties, highlights the importance of allowing adequate time for developing language and literacy skills. Where adequate time is available, children can become involved in independent reading of texts – a practice that has been shown to be strongly associated with increased reading achievement (Anderson, Wilson & Fielding, 1988) – and receive instruction in both higher- and lower-order reading skills. The *Primary School Curriculum* (NCCA, 1999b) suggests that 3 hours per week be allocated to all aspects of the teaching of English in Infant classes, and 4 hours per week at other class levels. Discretionary time, which can be applied to English or to other subjects, is also available – one hour per week for Infant classes, and two hours for other classes. However, three to six hours of English teaching per week may be insufficient to meet the needs of children with very low achievement in reading. For example, Shanahan (2001) considers 2-3 hours per day of instruction in English reading and writing (10 - 15 hours per week) to be a minimum requirement for pupils in 'high-poverty' primary schools, in addition to other opportunities to read and write during the school day.

Finally, although not intended as a school-wide restructuring programme, there is evidence that Reading Recovery can have an impact on the effective teaching of reading at school level. In an evaluation of the programme in County Monaghan schools (albeit not in designated ones) in 2000-02, Murtagh and Ní Threasaigh (n.d.) reported that programme elements such as diagnostic testing for specific skills at key stages, and the use of levelled readers were used by both learning-support and class teachers. Staff development sessions and observation of Reading Recovery lessons by teachers not directly involved in the intervention were identified as key elements in dissemination. The identification within participating schools of 'link teachers' to monitor the progress of pupils after they had left the Reading Recovery programme was also viewed as contributing to dissemination. The evaluators concluded that 'the most effective implementation of Reading Recovery was seen in schools in which the intervention was perceived as part of the whole-school approach to literacy and in which positive attitudes to change are a feature of the school' (p. 23).

Classroom Characteristics and Reading

The importance of classroom instruction in reading was highlighted by Snow et al. (1998) who concluded that 'quality classroom instruction in kindergarten and the primary grades was the single best weapon against reading failure' (p. 343). A number of features are associated with more effective literacy teaching at the classroom level. In the United Kingdom, Wray, Medwell, Poulson and Fox (2001) found that effective literacy teachers were more likely to 'embed their teaching of reading into a wider context and show how specific aspects of reading and writing contribute to communication' (p.132), to regularly monitor children's performances and adapt their teaching to the identified needs of the children in their class. Effective teachers' lessons were characterised by a clear structure (with a concise introduction and summary conclusion) and extensive modelling. Finally, when asked what a pupil needed to learn when beginning reading, effective teachers tended to emphasise the purpose of reading and how it was an enjoyable activity, whereas teachers in a validation group were more likely to focus on explaining the mechanics of reading.

In the US, Taylor, Pressley & Pearson (2002) identified several variables associated with 'more accomplished' teachers of beginning reading (First to Third grades) in a range of schools, including some with high levels of poverty. These variables, which tend to be under the control of individual teachers to a greater extent than the school-level variables reviewed earlier, were identified on the basis of their associations with achievement gains. They included:

- *Engagement of pupils* – more accomplished teachers had higher ratings for maintenance of time on task than less accomplished teachers. Successful teachers developed pupils' motivation to read, as well as the curriculum, instruction, and interaction tools required to sustain pupils' involvement.

- *Grouping for instruction* – more accomplished teachers spent more time in small-group instruction, and less on whole-group activities, than their less accomplished counterparts. Pupils in lower groups tended to spend as much time on higher-order reading and writing activities as pupils in higher groups.

- *Coaching of reading strategies* – more accomplished teachers engaged more often in 'coaching' of reading strategies than less effective teachers, who preferred 'telling' answers to pupils. Coaching involves explaining to a pupil how and when to use a strategy, and is intended to ensure independent and thoughtful application of strategies in the longer term.

- *Responding to pupils' needs* – much of the instruction provided by accomplished teachers tended to be informal, and was based on identified needs of pupils during ongoing teaching. Less accomplished teachers, on the other hand, tended to follow a fixed curriculum and were less flexible in addressing pupils' ongoing needs.

- *Coverage of a range of word-recognition strategies* – the main strategies employed by accomplished teachers were: (a) coaching children in the use of different strategies to figure unknown words as they were reading text; (b) providing explicit phonics instruction (including working on word families, making words with letters and learning the sounds of letters and letter-combinations); and (c) practicing sight words. Explicit teaching of phonics skills beyond First grade was viewed as counterproductive.

- *Use of higher-level comprehension questions* – more accomplished teachers asked more higher-level oral comprehension questions following reading, and had pupils respond to reading by writing more often than less accomplished teachers.

- *Monitoring of pupil achievement* – accomplished teachers monitored the achievement of pupils on a regular basis, using a range of curriculum-based measures, and made adjustments to instructional programmes accordingly.

- *Holding high expectations for pupils* – more accomplished teachers held higher expectations of their pupils, and made greater demands on them during instruction.

Given the importance of developing children's word recognition skills in the initial stages of learning to read, it is noteworthy that the coaching of word recognition strategies and an emphasis on use of higher-level comprehension questions were both observed in the classrooms of effective teachers. The use of higher-level comprehension questions from an early stage may play an important role in helping children to bridge the transition from learning to read (up to Third class) to reading to learn, where reading comprehension becomes more important, from Third or Fourth class onwards. It is relevant, in this context, that both the report on the outcomes of the IEA Reading Literacy Study for Ireland (Martin & Morgan, 1994) and the report on the 1998 National Assessment of English Reading (Cosgrove et al., 2000) identified a need to pay greater attention to teaching higher-order reading comprehension skills.

Two additional aspects of reading instruction identified as being important by Taylor et al. – monitoring pupil achievement and holding high expectations of pupils – are considered in more detail below.

Regular Monitoring of Pupil Achievement

A consistent feature of effective schools, effective intervention programmes, and effective classrooms is the regular assessment of pupils' reading performance and the use of assessment outcomes to inform teaching and learning. At the system level, and sometimes the school level, it is summative assessment information (such as pupils' average scores on norm-referenced, standardised tests of achievement) that is typically used to establish benchmarks and to monitor achievement. Indeed, it is difficult to envisage how progress towards achievement of targets for reading literacy could be achieved without individual schools establishing and monitoring their own targets, linked to national targets. Although pupils' scores on standardised tests can also be useful at the classroom level, there is evidence from one study (Kellaghan, Madaus & Airasian, 1982) that the provision of diagnostic information as well as norm-referenced information impacts positively on pupils' achievements.

Black and William (1998) argue that regular curriculum-based assessment, often based on documented teacher observations, and the provision of appropriate feedback to pupils, can be especially effective in promoting pupil learning outcomes. They emphasise the importance of self-assessment by pupils as young as 5 years of age, but argue that, in order to be effective in assessing their own ability, pupils need to have a clear picture of the targets that their learning is expected to attain. They also assert that formative assessment can be especially beneficial to lower-achieving pupils, while also raising overall standards. They stress the importance of providing guidance to pupils on how to improve, in combination with the outcomes of tests and other assessments.

In Ireland, curriculum-based assessment that includes the documentation of pupil learning outcomes appears to feature more strongly in learning-support and special education settings than in ordinary classrooms. It is perhaps regrettable in this context that the implementation of the 1999 Primary Schools Curriculum has not been supported to date by a stronger emphasis on, and in-career development in, the use of classroom-based assessments to enhance pupil learning. In the current study, an attempt is made to obtain information on teachers' perspectives on assessment, and on the ways in which they use assessment in the classroom.

Teacher Expectations

As indicated earlier, Taylor et al. (2002) found an association between high teacher expectations and improved performance in the reading of First to Third grade pupils. Other research has found that effective teachers have high expectations for their pupils regardless of the pupils' background and life experience (e.g., Lumsden, 1997). However, there is also evidence that some teachers may hold higher expectations for middle-class pupils than for those from poorer backgrounds (Brophy & Good, 1974). While there is a popular belief that teacher expectations are more likely to operate to the detriment of children of low socioeconomic status than of children of higher status, Kellaghan et al. (1982) found little support for this view in the case of Irish teachers' short-term expectations. It

has been argued that pupils may internalise the expectations that their teachers communicate to them, and that pupils may, in turn, adopt the beliefs that teachers hold about their ability and adjust their learning behaviour accordingly (Lumsden, 1997). According to Jussim and Eccles (1992), even small effects arising from teacher expectations may lead to large differences in achievement if they accumulate over time.

It may be a matter of concern that teachers of pupils in the most disadvantaged schools appear to hold low long-term expectations for their pupils. A large majority of teachers in the evaluation of the Breaking the Cycle scheme believed that most of their pupils would not stay in school beyond the Junior Certificate Exam, despite the fact that 80-90% of students nationally did so (Weir et al., 2002). The withdrawal by teachers of 8% of pupils from testing during an evaluation of the Breaking the Cycle scheme in Sixth class in 2002 because the pupils in question would not be expected to cope with the test may also be interpreted as evidence of low expectations, particularly when one bears in mind that just 4% had been withdrawn for the same reason in 2000, and less than 1% in 1997, when the scheme was introduced (Weir, 2003).

Paradoxically, Entwisle and Hayduk (1978) observed that the expectations of low-SES children exceeded the grades they were awarded in school, and that such children continued to hold high expectations despite receiving poor results. Moreover, they observed that the gap between expectations and performance was larger for low-SES children than for others. It is unclear why there is a discrepancy between the judgements of teachers and pupils on these matters, or how such a discrepancy might impact on pupils' reading performance.

Other Classroom Variables

Other classroom variables may indirectly affect reading achievement by, for example, increasing pupil engagement and motivation. Classrooms with a cooperative instructional and reward structure tend to enhance student motivation (Sharan & Shaulov, 1990). Classrooms in which students feel that teachers emphasize understanding work as much as getting the correct answer also contribute to students' self-efficacy (Roeser, Midgley & Urdan, 1996). A recent review by Guthrie and Wigfield (2000) identified a number of classroom factors associated with increased motivation and engagement, including the use of interesting texts (defined as 'single-authored works in which the text matches the topic interest and cognitive competency of the reader' (p.412)), the linking of academic learning to the 'real world', and to provision of some choice and control to pupils over what they do in English classes. Guthrie and Wigfield, as well as others such as Pintrich and Schrauben (1992), argue that the effects of school and classroom characteristics on achievement are not direct, but are mediated by pupil engagement and motivation.

Pupil Characteristics and Reading

In addition to pupil socioeconomic and family characteristics (though not necessarily independent of them), a range of personal characteristics can influence pupils' reading achievement. This section considers some variables that are specific to reading, including attitude to reading and motivation to read, and some that are more generic, including attendance at school and pupil mobility.

There is ample evidence of a link between attitudes to reading, motivation to read, and reading achievement (e.g., Cosgrove et al., 2000; Elley, 1992; Walberg & Tsai, 1985). Moreover, it has been observed that motivation and attitude become less positive over time, and that the 'sharply worsening attitudes of poor readers contribute substantially to the downward trend across the total population of students' (McKenna, Kear & Ellsworth, 1995, p. 952). Interest in reading has also been cited as a pupil variable associated with reading achievement, though measures of interest tend to be strongly correlated with measures of attitude (Sofroniou, Shiel & Cosgrove, 2002).

A number of factors appear to influence children's motivation to read, including what they perceive to be the functions of reading and their perceptions of themselves as readers. Children of parents who emphasise the entertainment value of reading tend to have more positive views of

reading (Baker, Scher, & Mackler, 1997), while children who do not perceive what is learned in school to be relevant to outside life are less motivated to invest time and effort in learning to read (Stipek, Feller, Daniels & Milburn, 1995). Children's beliefs about their competence and efficacy also relate to reading achievement, although the relationship is very much mediated by age. For example, Nicholls (1979) found that most First grade pupils (6-7 years) rated their reading ability as close to the top of their class, with no relation between self-ratings and actual achievement, whereas self-ratings by 12-year olds were much more varied and highly correlated with school grades. Although it could be argued that being a good reader *causes* self-efficacious beliefs about reading, there is evidence that the reverse is also true. For example, it has been shown that, even when previous performance is controlled, ability beliefs can predict performance (Eccles, Adler, Futterman, Goff, Kaczala, Meece, & Midgley, 1983), and that students with a high sense of academic efficacy show greater persistence, effort, and intrinsic interest in academic learning and performance (Schunk, 1984). On balance, it would appear that the relationship between achievement and variables such as self-efficacy, perceived competence, and self-concept is reciprocal (Wigfield & Karpathian, 1991).

Attendance at school has also been found to be positively related to achievement, both in mathematics (e.g., the Third International Mathematics and Science Study (Mullis, Martin, Gonzalez, O'Connor, Chrostowski, Gregory, Garden, & Smith, 2001)) and reading (Cosgrove et al., 2000), even when initial achievement is controlled for (Kain & O'Brien, 1999). Absenteeism due to chronic illness is related to even lower achievement than that found among others with poor attendance (Wolfe, 1985).

Pupil mobility is also associated with reading achievement, although mobility tends to be compounded by other variables such as poverty, poor housing, and single-parent family status (Newman, 1988). While a once-off change of school is associated with only a very small decrement in achievement, more frequent moves are associated with larger differences. In one study, it was found that each additional move beyond the first was associated with a one-month decline in reading achievement (Kirkpatrick and Lash, 1990).

2. Assessment Instruments

This chapter describes the questionnaires and instruments used in the Survey of English Reading Literacy in Designated Disadvantaged Schools (the Literacy Survey). First, the *Drumcondra Sentence Reading Test* is described. This is followed by a description of questionnaires. The third part of the chapter reports on the pilot phase of the survey.

The Drumcondra Sentence Reading Test

Pupils' reading literacy was assessed using a newly-developed test: the *Drumcondra Sentence Reading Test* (DSRT). In this section, key features of the DSRT are described, the development of the test is outlined, and the use of test scores to interpret performance on the test is considered.

Key Features of the DSRT

The DSRT is a measure of reading achievement that can be administered to pupils in primary schools. There are six levels of the test – corresponding to the First to Sixth classes (inclusive). At each level, there are two forms of the test – Forms A and B. There are 40 items at each level. The test takes approximately 35 minutes to administer – actual testing time is 20 minutes, but additional time is required for completing identification information, doing sample items and recording responses. Pupils taking Levels 1 and 2 of the test (i.e., those in First and Second classes) mark their answers in their test booklets. Pupils taking Levels 3-6 (i.e., those in Third to Sixth classes) transfer their answers to a machine-scorable answer sheet. Items in the DSRT are all of the multiple-choice variety. The pupil is asked to read a sentence and to select the word (from among four alternatives) that best completes the sentence. At Level 1, a small number of items are accompanied by pictures. The following example items taken from Levels 1 and 3 of the DSRT are similar to those that pupils in the Literacy Survey were asked to complete:

First Class: Cats like to drink _____.
tea   toys   milk   butter

Third Class: They _____ all their money in the shop near the school.
a) worked   b) spent   c) liked   d) caught

An important feature of the DSRT is that there is built-in overlap across levels and forms. For example, 10 of the items at Level 3, Form A also appear at Level 2, Form A, and 10 more appear on the Level 4, Form A. This overlap facilitates the development of a single achievement scale, covering all levels of the test, which enables one to compare expected and actual progress from one level to the next.

Development of the DSRT

In developing the DSRT, care was taken to ensure that the early levels of the test included only reading vocabulary with which the majority of pupils at the corresponding class level would be expected to have encountered. Hence, two sources in particular provided vocabulary for potential test items: a list of high-frequency sight words, and a word list based on textbooks in use in the First and Second classes at the time when the test was being developed. At higher levels of the test, target vocabulary was drawn from children's literature, as well as from their reading textbooks. The items themselves were developed by two researchers at the Educational Research Centre, who had experience of test development, and experience in teaching reading to primary-level pupils.

As part of the development of the DSRT, a pilot study was conducted in May 2001, involving a total of 27 schools (including 8 designated as disadvantaged) and 4,338 pupils. Three parallel test forms (A, B and C) were administered to pupils by their class teachers. On average, each form of the test was administered to about 250 pupils.

Feedback from teachers about the tests was generally positive. Most agreed that the items were appropriate for the grade levels being tested. Analysis revealed that average percent correct values were slightly higher than desirable for First, Second, Third, and Sixth classes. In preparation for the standardisation study, Forms A, B and C were combined to yield two somewhat more difficult forms (A and B).

The DSRT was standardised on a nationally representative sample of schools and pupils in May 2002. The target population for the standardisation was all pupils enrolled in First through Sixth classes in Irish primary schools (excluding those enrolled in special schools or special classes in ordinary schools). The main method of stratification was by school size. Schools were separated into three groups, depending on their size: large (300 or more pupils), medium (100-299 pupils), and small (less than 100 pupils). Within each of these 'explicit' strata, schools were sorted by gender composition (an implicit stratifying variable). There were seven gender strata, ranging from 0% girls to 100% girls. Schools were selected initially using the number of pupils in Third and Sixth classes as a measure of school size. Then an additional stratum of small, medium, and large junior schools was added to the sampling frame to take into account those schools with pupils in the First and/or Second classes, but not in the senior classes.

Within each explicit stratum, schools were selected with probability proportional to size. The number of schools selected within each such stratum was taken to approximate the proportion of pupils in that stratum in the population, where the total number of schools to be selected was 100. Where a selected school had more than two classes at a grade level, two classes at each level were selected at random. A sample of over 2,000 pupils was drawn at each grade level (thereby allowing each form of the DSRT to be administered to about 1,000 pupils). Summary characteristics of the population and the achieved samples are displayed in Table 2.1.

Of the 100 schools selected, 93 agreed to participate, giving a response rate of 93% at the school level. Fourteen of the participating schools were designated disadvantaged. All testing was conducted during a two-week period in May 2002. The performance of pupils in each stratum was weighted, based on the representation of pupils in that stratum in the population.

Table 2.1: Total school population and DSRT standardisation sample of schools and pupils, by grade level

Grade Level	Population		Sample (Achieved)	
	Schools	Pupils	Schools	Pupils
1st	2896	50883	86	2235
2nd	2999	51872	78	2189
3rd	3003	54090	81	2155
4th	3017	54651	86	2294
5th	2976	54150	87	2288
6th	2977	53619	87	2163

Following administration of the DSRT in participating schools, pupils' answer booklets and answer sheets were scored at the Educational Research Centre, and a total test raw score (the number of items for which a correct response was recorded) was computed for each pupil. In preparation for the current study, Levels 1, 3 and 6 of the test (Form A only) were scaled separately using item response theory (IRT). For each level, the mean score was set at 100 and the standard deviation at 15. The item and scaling parameters resulting from these analyses were saved, and used to estimate the scores of pupils in the current study on the standardisation study scales (see Chapter 4). In

addition to separate scales for these levels, a test-wide scale encompassing all test levels and forms was constructed using IRT. The mean and standard deviation of this scale were set at 500 and 100 respectively. The item and scaling parameters resulting from this analysis were used to estimate the scores of pupils in the current study on the test-wide scale (see Chapter 4).

The reliability of a test provides an indication of the confidence a test user can place in a set of results. Test-retest reliability is concerned with the consistency of test scores by the same person on the same test (i.e., how similar a person's scores are from one measurement to another). Two indices of reliability were obtained for the DSRT (Table 2.2). One, the K-R 20 reliability coefficient, is applied in computing the standard error of measurement associated with raw scores. The second, a composite reliability index (Andrich, 1988), provides a summary of the reliability of IRT scale scores. This index is constructed by subtracting from 1 the average of the squared standard errors associated with trait scores, divided by the trait score variance. Both the K-R 20 reliability coefficients and the composite reliability index scores reported in Table 2.2 can be regarded as satisfactory.

Table 2.2: K-R 20 reliability coefficients and composite reliability indices – DSRT standardisation study

Level/Form	N	K-R 20 Reliability Coefficient (Raw Scores)	Composite Reliability Index (IRT Scale Scores)
1A	1104	0.954	0.938
3A	1061	0.922	0.906
6A	1075	0.896	0.901

Development of Survey Questionnaires

Nine questionnaires were used to generate background and contextual data for use in interpreting the performance of pupils in designated schools on the DSRT in the current study. Questionnaires were developed to administer to those selected to take the DSRT, their parents and their class teachers. Also, questionnaires were prepared for the learning-support teachers and principals in the selected schools. Some measures (the Pupil Rating Form, Pupil Attitudes Questionnaire and Parent Questionnaire) had different versions for First class pupils and for Third and Sixth class pupils.

All measures were developed between November 2002 and January 2003. The literature of the teaching and assessment of reading, curriculum documents, guidelines documents on various aspects of school organisation such as school development planning and learning support, and questionnaires used in previous assessments administered by the Educational Research Centre, including the 1998 National Assessment of English Reading (Cosgrove et al., 2000) informed the development of the questionnaires for the Literacy Survey.

School Questionnaire

A School Questionnaire was developed to obtain information from principal teachers about school organisation and planning for reading. The questionnaire had five main sections. The first examined school background characteristics, including enrolment, attendance, pupil mobility, parent-teacher meetings, and availability of learning-support and other additional support in English. The second section examined policy issues, including schools' policies in relation to evaluation, assessment, standardised testing, and the teaching of English and of reading. Other questions in the section concerned the School Plan for English and the extent to which various stakeholders were involved in developing the plan. Finally, principals were asked about programmes to support parents in helping their child to read, and any after-school programmes connected to their school.

The third section of the School Questionnaire examined the availability and adequacy of resources such as library books and computers, as well as the frequency with which computers were used by pupils. Principals were also asked to indicate the extent to which a number of factors

affected the teaching of reading in their school. The fourth section – School Staff - included a number of items related to staffing levels (including involvement of adult volunteers), staff turnover, how allocated posts of responsibility were assigned in practice, and some items related to in-career development. The last section of the questionnaire included items to establish the proportion of pupils at different class levels in need of learning-support, and the proportions who had been or needed to be assessed for general or specific learning disabilities.

Teacher Questionnaire

A Teacher Questionnaire was designed for class teachers of pupils in the survey. There were four main sections in the Questionnaire. The first examined teacher background characteristics, including gender, employment status, qualifications, number of pupils taught, and participation in in-career development. It also included items about the teacher's involvement in developing the school plan for literacy, interaction with parents and the number of books, if any, in the classroom library. The second section examined English teaching practices, including the amount of time spent teaching English in general and English reading in particular, and the use of adult volunteers. Other areas covered included factors influencing lesson plans, the proportion of time spent on whole class teaching, frequency of and parental involvement in homework, and frequency of use of computers and other resources (such as novels or magazines). The section also included questions on frequency and methods of pupil assessment, activities used in reading classes, and the proportion of time in a typical English class spent on instruction and on class management.

The third section on learning-support and resource teaching contained items examining the extent of collaboration between the class teacher and the learning-support or resource staff in the school, and the integration between a pupil's learning-support and classroom experiences. The final section – Your School – contained a number of opinion items relating to school climate, including clarity and implementation of school policies, sense of collegiality, attitudes towards innovation and professional development, and the extent to which school staff encourage parents to become involved in the school.

Learning Support Teacher Questionnaire

A questionnaire was developed for teachers providing learning support in *English* in schools in the survey. There were four main sections in the questionnaire; the first examined background characteristics, including gender, postholder status, teaching experience, qualifications, and participation in and satisfaction with in-career development. The second section – Your Work – sought information on caseload, the proportion of time spent providing learning-support in English, frequency of meetings with class teachers, principals and parents, and the types of instructional strategies used. Other items covered factors that might impede provision of learning-support, and the availability of facilities (such as a learning-support room) and resources (such as appropriate textbooks and computer software).

The next section – Learning-Support in English in This School – included the perceived familiarity of other teaching staff with the Department of Education and Science's *Learning-Support Guidelines*, and the usefulness of the *Guidelines*. Other items examined the degree of co-ordination between the learning-support programme and other programmes (such as Breaking the Cycle), and between the learning-support programme and class reading programmes. The final section mainly consisted of open-ended questions. These asked for respondents' suggestions as to how the effectiveness of learning-support programmes in designated schools might be enhanced.

Pupil Rating Forms (First class and Third / Sixth classes)

Pupil Rating Forms were developed to gather context information about each pupil who participated in the survey. Class teachers were asked to provide some background details about each pupil and to rate them on a number of variables. Areas covered included background variables (e.g., parental

occupations, ethnicity, and whether or not the pupil had been enrolled in the school for all grades offered by the school), pupil engagement with school (e.g., attendance, behaviour and participation in class), and, pupil achievement in English (teacher ratings of a pupil's reading, writing, oral language and spelling, and the textbook being read by the pupil in class at the time of the study). Other areas covered included parental engagement with education (e.g., ratings of parents' involvement with homework, their interest in and awareness of their child's progress, and their general support and encouragement) and the pupil's participation in additional support (including whether or not the pupil had ever been in receipt of learning-support or resource teaching, amount (duration and quantity) of learning-support received, and an estimate of the expected duration of learning-support for the pupil). Finally, teachers of First class pupils rated each pupil's ability to be able to cope with the reading and writing tasks of Third class, while teachers of Third and Sixth class pupils rated each pupil's ability to cope with post-primary reading tasks and the everyday reading demands of society.

Parent Questionnaire (First class and Third / Sixth class)

A Parent Questionnaire was designed for parents (or guardians) of each pupil in the survey. A number of items examined parental background characteristics, including education, occupation, employment status, medical card holder status, relationship to the pupil, and family size and composition. Respondents were also asked about number of books in the home, and frequency of reading various types of materials (e.g., books, magazines). Parents were asked about the amount of help the pupil received from parents or others, and how frequently the parents read to or listened to the pupil read, or discussed something that the pupil had read, and about the frequency of their reading activities with the pupil, both prior to primary school, and in the Infant classes.

A number of items covered pupil characteristics, including attendance at Early Start or a pre-school, use of dictionaries or computers at home, attendance at a Homework Club, progress in a number of reading-related areas, and enjoyment of reading. Finally, parents were asked about the highest level of education they expected their child to attain, and whether they had chosen a post-primary school for their child (included only in the Third/Sixth class version of the questionnaire).

Pupil Attitudes Questionnaire (First class)

A very short questionnaire was designed for administration to First class pupils. Among the issues addressed were background information (e.g., gender, age, place of birth and language typically spoken in the home), academic self-perception (a pupil's perception of how good s/he was at reading, writing and spelling) and activities engaged in as part of homework. Finally, pupils were asked about their attitudes to school and to reading (e.g., reading for fun, talking to friends and family about what was being read, and beliefs about the importance of doing well at reading).

Pupil Attitudes Questionnaire (Third / Sixth classes)

A much more detailed Pupil Attitudes Questionnaire was developed for pupils in Third and Sixth classes. Pupils were asked for background information, including gender, age, place of birth and language typically spoken in the home. Those who were born in another country were also asked to indicate what age they were when they came to live in Ireland. Items on academic self-perception included pupils' perceptions of how good they were at reading, writing and spelling, relative to their classmates, and whether or not they believed that reading was their best subject. Pupils were also asked about how often they did homework, and the amount of time spent completing homework, as well as the activities engaged in as part of homework. Other items examined attitudes to reading, including reading for pleasure (frequency of library use, reading books, newspapers or magazines for pleasure at home), and perception of reading as interesting or boring.

Pupils' motivation to read, including willingness to discuss reading materials with others, perceived importance of being a good reader, and avoidance of more complicated reading material was examined, as was satisfaction with school (perceptions of school discipline, fairness, and teacher expectations) and use of metacognitive strategies (e.g., checking through a story, asking questions of others, thinking about other topics when reading and reading stories as fast as possible). Finally, pupils were asked about the highest level of education they expected to attain, and would like to attain.

Pilot Study

A pilot study involving 10 schools (not included in the sample for the main study) was carried out during January and February, 2003. The schools were chosen to represent a mixture of location (urban / rural), gender (same-sex / mixed sex) and age range (junior / senior / schools offering all grades). In all 10 schools, the appropriate staff were asked to complete School Questionnaires, Teacher Questionnaires and Learning-Support Teacher Questionnaires. All questionnaires distributed included comment / feedback sheets to be completed by respondents.

A subset of five schools and 200 pupils was selected to complete the DSRT and Pupil Attitudes Questionnaires. In these schools, class teachers were also asked to complete Pupil Rating Forms and Parent Questionnaires were distributed to parents. All five schools in which the DSRT was administered were located in Dublin city and county. Test administration was conducted by ERC staff. Administration of the Pupil Attitudes Questionnaires was carried out by class teachers, under the direction of ERC staff.

Teachers were generally satisfied with the content of the questionnaires directed at teaching staff. However, some felt that the DSRT was a difficult test for pupils in designated disadvantaged schools, particularly as it was administered relatively early in the school year rather than in late Spring, when it had been standardised. A number of opinion items on the First class Pupil Attitudes Questionnaire proved too difficult for some pupils.

Subsequent to the pilot study, minor modifications (to improve item clarity) were made to the School Questionnaire, Teacher Questionnaire, Learning-Support Teacher Questionnaire and Parent Questionnaire. On the First class version of the Pupil Attitudes Questionnaire, five opinion items were changed from 5-point to a 3-point response scales. Also, negatively keyed items were reworded to positively keyed items, as a number of First class pupils had difficulty understanding how to respond to a mixture of negatively and positively keyed items. All modifications were reviewed and approved by the survey Advisory Committee prior to the main survey. The Parent Questionnaire was also reviewed by staff at an Adult Learning Centre, and by some parents attending classes at the Centre, in order to generate information on its readability.

Issues about the difficulty of the DSRT were raised by teachers, and the development of a test designed specifically for designated disadvantaged schools was proposed. However, for a number of reasons, it was decided to use the DSRT in the main survey. Firstly, as the pilot study was conducted in January, rather than the more typical May administration, it was likely that pupils' scores were lower than might be expected later in the school year. Secondly, to develop a set of tests specifically for pupils in designated disadvantaged schools would take considerable time, and such tests would not be available for the 2003 phase of testing. Thirdly, and perhaps most importantly, such tests would provide norms that were not comparable to the population as a whole. Consequently, while such a survey would be able to provide data on differences between and within designated disadvantaged schools, it would not be possible to draw any conclusions about the reading achievement of pupils in designated disadvantaged schools, relative to that of pupils nationally.

3. Survey Procedures

This chapter describes the main survey procedures, including the sampling design, and the methods used in selecting schools and classes for participation. A brief description of the calculation of sampling weights, data analysis procedures and scaling methods for the *Drumcondra Sentence Reading Test* (DSRT) is presented. Information regarding survey administration and response rates for each instrument administered as part of the survey is also provided.

Sample

The selected sample for inclusion in the survey was based on a representative national sample of designated disadvantaged (DD) schools within the mainstream primary school system. DD schools compose almost 10% of schools (314 of 3164) in the country. Inclusion criteria for the target population consisted of First, Third and Sixth class pupils in DD schools. One Junior school was excluded as it had no pupils in First class; hence the final target population was 313 DD schools. Information relating to school size, gender composition and other variables used in sampling was obtained from the Department of Education and Science database for 2001/02.

Sample Design

The sample design adopted was a complex two-stage cluster design. The primary sampling unit (PSU) at the first stage of sampling was the school. Schools in the population were ordered by size (an explicit stratifying variable) and gender composition (an implicit stratifying variable). Initially, school with pupils in the senior classes (Third to Sixth) were selected. Subsequent to this, a smaller number of schools with Junior schools only were selected.

The explicit stratifying variable, the size of the school, included the following categories for schools with senior classes: very large schools[1], large schools (>133 pupils in classes 3-6); medium schools (79-133 pupils in classes 3-6); and small schools (<79 pupils in classes 3-6). For junior schools the categories were: very large schools; large schools (more than 50 pupils in First) and small schools (less than 50 pupils in First). The measure of size was taken as the total number of pupils in Third through Sixth classes, with the exception of junior schools, where the measure of size was the number of pupils in First class. Before selecting either Senior or Junior schools, schools within each stratum were ordered by gender composition according to the following categories: 0% girls; 1-20% girls; 21-40% girls; 41-60% girls; 81-99% girls and 100% girls. Next, the required number of schools within each explicit stratum was selected using procedures described below. The second stage of sampling, class selection, was carried out subsequent to schools agreeing to participate in the survey. A maximum of two classes were selected at each grade level in each school. With the exception of 41 pupils (who were judged by their teachers to be unable to attempt the DSRT), all pupils within a selected class were chosen to participate.

Required Sample

Due to the complex sample design adopted, a relatively large sample size was required in order to yield an effective sample size of at least 400 pupils at each of the three grade levels. In estimating the numbers of schools and pupils to be selected at each grade level, the intra-cluster correlation was

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[1] Very large schools were schools whose size was greater than the sampling interval used in the selection procedure (meaning that the school(s) would be sampled more than once). An explicit stratum of very large schools is constructed to avoid this problem, and all such schools are automatically selected.

used. This index of the clustering of pupils within schools was taken as 15%, a conservative estimate, based on the reading achievement results obtained in an evaluation of the Breaking the Cycle initiative (Weir & Milis, 2001). Based on this value, it was estimated that at least 2,000 pupils and approximately 70 schools would be needed to yield an effective sample size of about 400 pupils at each grade level (see Table 3.1).

Selected Sample

School selection was based on probability proportional to size across each of the seven stratum using a random start and fixed interval procedure. Replacement schools were also selected at this time from the sampling frame. As part of the first stage of sampling, 70 schools with pupils in Third to Sixth classes were selected for inclusion in the survey. As the 70 schools yielded insufficient numbers of First class pupils, 25 extra schools with pupils in Junior classes only were selected to provide an adequate sample of First class pupils. Table 3.1 shows the numbers and percentages of pupils enrolled in each of the seven strata for the target population. It also shows the number of schools needed to be sampled in each stratum (based on the total number of schools to be selected times the proportion of pupils in the target population at Junior and Senior levels).

Table 3.1: The number of schools to be selected within each stratum

	Stratum	N pupils nationally[*]	% of pupils nationally	N schools required
Junior Schools	Small	620	26.07	7 (25*0.2607)
	Large	1421	59.76	15 (25*0.5976)
	Very Large	337	14.17	3 (25*0.1417)
	Total Junior	*2378*	*100*	*25*
Senior Schools	Small	4861	15.71	11 (70*.15.71)
	Medium	9539	30.83	22 (70* .3083)
	Large	16072	51.94	36 (70*.5194)
	Very Large	473	1.53	1 (70*.0153)
	Total Senior	*30945*	*100*	*70*

[*]In Junior Schools, this was based on the numbers of pupils in First class; In Senior Schools, it was based on the numbers for the Third to Sixth classes combined.

Once schools were selected from the sampling frame, they were invited to participate in the survey and to supply information regarding the number of classes and pupils at each grade level. The second stage of sampling involved selecting classes. Within a school, if the number of classes at a selected grade level was less than or equal to two, all classes at that grade level were selected. If the number of classes at a selected level was greater than two, then two of the classes were randomly selected. Among the schools selected in the sample were two Gaeltacht schools, one Gaelscoil and seven schools in the Breaking the Cycle programme.

Achieved Sample

School Level

Ninety-four of the 95 selected sample schools agreed to participate in the survey. One school declined to participate, and was not replaced as the refusal was made shortly before testing was scheduled to start, leaving insufficient time to contact a replacement school. Of the 94 schools in which pupils were tested, an issue over test administration arose in one. Therefore, data for pupils in this school have not been included in the analyses of pupil achievement. These pupils are included but flagged in subsequent tables dealing with response rates.

Pupil Level

A small number of pupils were exempted due to limited English proficiency, including those with less than one year of instruction in English, or because they had been diagnosed with a moderate learning disability. Parental refusal and long-term illness also precluded testing in a small number of cases. As shown in Table 3.2, 0.62% of pupils were exempted from attempting the DSRT.

Table 3.2: Table of exemptions overall and by grade level (DSRT)

	Overall		1st class		3rd Class		6th Class	
	N	% of total	N	% of total	N	% of total	N	% of total
Total Expected	7256	100.0	2451	100.0	2351	100.0	2454	100.0
Long term ill	1	*0.01*	0	-	0		1	*0.04*
Parental refusal	3	*0.04*	0	-	1	*0.04*	2	*0.08*
Moderate LD	33	*0.45*	12	*0.49*	13	*0.55*	8	*0.33*
Limited English	6	*0.08*	1	*0.04*	4	*0.17*	1	*0.04*
Other	2	*0.03*	2	*0.08*	0	-	0	-
Total exempted	*45*	*0.62*	*15*	*0.61*	*18*	*0.76*	*12*	*0.49*
Eligible	7211	*99.38*	2436	*99.39*	2333	*99.23*	2442	*99.51*

Gender Distribution

Gender composition was used in the sampling frame as an implicit stratifying variable at the school level. As can be seen from Table 3.3, approximately 40% of schools were single-sex, while half contained an even mix of boys and girls.

Table 3.3: School-level gender composition of achieved sample

	Gender Category (% girls)						
	0%	1-20%	21-40%	41-60%	61-80%	81-99%	100%
N schools	18	1	5	47	1	2	20

Geographic Distribution

Most schools were located in the wider Dublin area, although only three were located in an inner city area (postal codes 1 – 3). Twenty-one schools were located in North Dublin, 27 were in West Dublin, and eight were in South Dublin. There were 16 other city schools (11 in Cork and five in Limerick). Of the remaining schools, six were located in other areas of Munster, nine in Leinster (excluding Dublin), five in Connacht, and one in Ulster.

Summary of Achieved Sample

Table 3.4 presents the number of schools and pupils at each grade level across each of the seven strata in the target population, based on Department of Education and Science figures for 2001/02. The table also shows the *expected* number of pupils within the 95 selected schools, based on pupil enrolment data supplied by schools, and following a selection of up to two classes per school. This is followed by the number of *eligible* pupils in the achieved school sample of 94 schools (i.e., enrolment figures adjusted for exemptions and more recent pupil movement into or out of a class or school). The *achieved* sample represents the number of pupils who actually attempted the DSRT.

Test Administration

Test administration was carried out in each school on a pre-assigned day between the 3rd and the 23rd of May, 2003. Administration was carried out by ERC staff, retired Department of Education and Science inspectors, retired school principals, and in one case, a psychology postgraduate student. Test administrators were assigned one or more schools, depending on school locations and administrator availability. ERC staff liaised with school principals and test administrators in scheduling a testing date. In advance of test administration, administrators attended a half-day

Table 3.4: Number of pupils in First, Third and Sixth class in the population and selected samples by stratum

Stratum	DES number of schools and pupils in the population		Expected number of schools and pupils in the selected sample				Actual number of schools and eligible pupils in the sample				Achieved Sample			
	N Sch	Sch size[2]	N Sch	Pupils 1st	3rd	6th	N Sch	Pupils 1st	3rd	6th	N Sch	Pupils 1st	3rd	6th
Small junior	21	620	7	210	0	0	7	207	0	0	7	188	0	0
Large junior	22	1421	15	606	0	0	15	589	0	0	15	542*	0	0
V. large junior	3	337	3	129	0	0	3	128	0	0	3	117	0	0
Small senior	94	4861	11	132	160	156	11	134	159	155	11	128	145	139
Medium senior	92	9539	22	520	533	580	22	515	532	575	22	459	487	510
Large senior	80	16072	36	868	1664[3]	1726[3]	35	863	1580	1660	35	804	1434	1447
V. large senior	1	473	1	0	63	52	1	0	62	52	1	0	54	45
Total	**313**	**33323**	**95**	**2463**	**2420**	**2514**	**94**	**2436**	**2333**	**2442**	**94**	**2238**	**2120**	**2141**

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[2] For Senior schools, school size refers to the number of pupils enrolled in Third through Sixth classes (inclusive), according to the Department of Education and Science primary schools database (2001/02 school year). For Junior schools size was based on the number of pupils enrolled in First class only.

[3] One school, which declined to participate in the survey, did not provide class size data. Average Third and Sixth class enrolment for other schools in the same stratum were used to provide a notional enrolment of 48 pupils (in two class groups) at Third and Sixth class levels.

induction session. Here, they were familiarised with the test materials, procedures for testing and arranging for the collection of materials that had already been distributed to schools to circulate and complete. Instructions for returning outstanding materials were also given.

In all cases, the DSRT was administered by trained administrators, while class teachers typically administered the Pupil Attitudes Questionnaire. The DSRT was administered as a timed (20 minutes) test, while the Pupil Attitudes Questionnaire was untimed, and took an average of 30 minutes to complete. Where possible, the DSRT and the Pupil Attitudes Questionnaire were administered on the same day, to secure against increasing rates of absenteeism. Pupils exempted from the DSRT component of testing were encouraged to complete the Pupil Attitudes Questionnaire. To ensure test security (important if the test is to be used in any future assessment) all DSRT booklets were removed from school premises on after testing.

Response Rates

One selected school refused to participate in the survey. Therefore, the response rates for each instrument shown in Tables 3.5 and 3.6 are based on the 94 schools in the achieved sample. The highest response rate was achieved for sets of Pupil Rating Forms, returned by almost all (98.8%) teachers (corresponding to 98.2% of pupils). Response rates for School Questionnaires, Learning-Support Teacher Questionnaires and Teacher Questionnaires were also high. At the pupil level, there was an overall high response rate for both the DSRT and the Pupil Attitudes Questionnaire (approximately 90%), while the response rate for the Parent Questionnaire was slightly lower (86%) (Table 3.6). However, the latter response rates are based on *all* pupils eligible for testing, including pupils who had recently joined the class. Many of these pupils' parents were not sent a Parent Questionnaire to complete, thus lowering response rates.

Table 3.5: Response rates for school- and teacher-level instruments, across grade levels

Instrument	N	N returned	% of total returned
School Questionnaire	94	90	*95.7*
Learning-Support Questionnaire	117	110	*94.0*
Teacher Questionnaire	336	312	*92.9*
Sets of Pupil Rating Forms	336	332	*98.8*

Table 3.6: Pupil-level response rates overall, and by grade level

Instrument	Overall (N=7211)	1st Class (N=2436)	3rd Class (N=2333)	6th Class (N=2442)
DSRT	90.1%	91.9%	90.8%	87.6%
Pupil Attitudes Questionnaire	89.7%	91.9%	90.0%	87.8%
Pupil Rating Forms	98.2%	99.0%	98.4%	97.0%
Parent Questionnaire	85.9%	88.3%	86.6%	83.6%

Slight discrepancies in response rates are found between the DSRT and the Pupil Attitudes Questionnaire. There are three reasons for this: firstly, both instruments may not have been administered on the same day, therefore leading to different pupils being present on the different days; secondly, some pupils were absent from their schools or classrooms within the school day; and thirdly, some pupils with limited English proficiency or with a moderate general learning disability completed the Pupil Attitudes Questionnaire (which was read aloud to the class by the administrator), but did not attempt the DSRT (which is a test of silent reading).

Sampling Weights

Weights were calculated to take into account that pupils in some strata were over-represented in the sample, by design, while pupils in other strata were under-represented. Separate weights were computed for each class. Each weight consisted of the product of the following:

1. A school base weight. This was calculated for each school in each of the seven strata (small junior schools, large Junior schools, very large junior schools, small senior schools, medium senior schools, large senior schools and one very large senior school). The school-level weight component was calculated for each selected school as:

$$\frac{\text{number of selected pupils in stratum}}{\text{total number of pupils in stratum}} \text{ x number of pupils in the sampled school}$$

For small, medium and large Junior schools, the number of pupils in the population and the number of pupils in the selected school was defined as the total number of pupils in First class and was taken from the sampling frame. For other schools, the numbers of pupils in the Third through Sixth classes (inclusive) was used in computing 'total number of pupils in the stratum' and the 'number of pupils in the sampled school'.

2. A school-level correction was made for each stratum to take school non-response into account. This was calculated for each stratum, as follows:

$$\frac{\text{actual number of schools in the achieved sample}}{\text{intended number of schools in the achieved sample}}$$

3. A class base weight. This was calculated for each selected class in a school for each grade level, and reflects the probability of selection of a class as follows:

$$\frac{\text{number of selected classes in the school}}{\text{number of classes in the school}}$$

The class base weight is 1 if all pupils are selected at a grade level within a school.

4. A correction for strata with schools not containing First classes. In the case of First class only, this weight was calculated in order to correct for an over-estimation of First class numbers since some schools in the sample did not have First classes. This was calculated as:

$$\frac{\text{number of schools in the stratum - number of schools without First class pupils}}{\text{number of schools in the stratum}}$$

5. A pupil-level correction for non-response weight. This was calculated for each pupil, and was based on his/her class group:

$$\frac{\text{expected number of pupils}}{\text{number of pupils who completed the test}}$$

The expected number of pupils was the number of pupils enrolled in the class at the time the schools agreed to participate in the study, including pupils subsequently exempted.

6. Population weights for First class were calculated by obtaining the inverse of the product of the weights described in 1-5 above. The population weight for Third and Sixth class pupils was calculated as the inverse of the product of 1-3 and 5 above.

7. The sample weights were calculated as:

$$\frac{\text{population weight x number of pupils who completed the test}}{\text{total expected number of pupils in the population}}$$

Scaling of the DSRT

Three approaches to reporting on the performance of pupils in DD schools on the DSRT are adopted in the current study. Pupils' performance on the test is compared with the performance of pupils in the standardisation sample, using both grade level comparisons and a test-wide scale, and, finally, pupils' performance is compared to other pupils in the Literacy Survey.

Performance Relative to the Standardisation Sample

The first approach compares the performance of pupils in First, Third and Sixth classes in DD schools to that of the representative national samples of pupils at the same class levels who participated in the standardisation of the DSRT in May 2002. The standardardisation of the DSRT, the development of national norms, and the scaling of the test using Item Response Theory methodology is outlined in Chapter 2.

Performance on a Test-Wide Scale

The second approach involves placing the performance of pupils in the current study on a DSRT test-wide scale, developed in the course of standardising the test in 2003. This scale, also generated using Item Response Theory methodology, has a mean of 500, a standard deviation of 100 and covers all 12 levels/forms of the DSRT. The test-wide scale allows a comparison of reading development between First and Third classes, and between Third and Sixth classes among pupils in the Literacy Survey. It also enables such development to be related to that achieved by pupils in the standardisation study at the same class levels.

Performance Within the Literacy Survey

The third approach describes the performance of pupils in designated schools relative to one another. It is based on a re-scaling of the DSRT using the nationally representative samples of pupils in First, Third and Sixth classes in DD schools who participated in the current study in May 2003. The use of re-scaled scores removes some of the skewness that would result if derived scores based on the 2002 standardisation study were used, and therefore allows for a better description of the associations between performance on the DSRT and a range of school and home variables.

Item Response Theory was used to scale the DSRT scores of pupils in DD schools in the current study. Separate scales were developed for pupils in the First, Third and Sixth classes, each with a mean of 100 and a standard deviation of 15. Item Response Models involve mathematical expressions that provide the probability of a correct response to an item as a function of the estimated ability of the pupil, and hence place items and pupils on the same underlying scale. Many different models exist. A three-parameter model (3PL), involving item difficulty, item discrimination, and the probability of a correct response due to guessing, was used in this study, since all items were of the multiple-choice variety. The model was implemented with the aid of the BILOG software program (Mislevy & Bock, 1990), which uses a marginal maximum likelihood method to estimate item parameters. Sampling weights were not used in computing item parameter estimates and pupil ability scores. However, as indicated below, pupil weights were used in scaling the test to a specified mean and standard deviation.

As part of the modelling process, the goodness-of- fit of the items to the models was checked using the likelihood chi-square statistic produced by BILOG. This compares the observed frequencies of correct and incorrect responses for an item at various ability levels in the distribution of ability scores, with those expected from the fitted model at the means of the intervals (i.e., the expected proportion correct conditioned on proficiency versus the proportion correct predicted by the estimated item function). Although a small number of items in First class in particular had chi-square values that were less than .01, the items were retained in the model, since an inspection of the corresponding item curves revealed that deviations were not serious. Pupils' logit (ability) scores were placed on a scale with a mean of 100 and a standard deviation of 15, using the following formula:

$$\text{Scale score} = 100 + \left(\frac{\text{weighted mean of logit scores}}{\text{weighted standard deviation of logit scores}} \times 15 \right)$$

Data Analysis Procedures

As a complex clustered sampling technique was used in the sampling of schools, variance estimation of pupil characteristics was likely to be underestimated. This is due to using a cluster design with different probabilities of selection being used. Hence, pupil characteristics in a given class and school tend to be correlated with one another. The implication of this is that standard errors of the test statistic in the selected sample (calculated with software that assumes simple random sampling) are likely to underestimate the true sampling variance of estimates in the population. Therefore, it is necessary to adjust for this when extrapolating from sample to population statistics.

This was achieved by using the statistical package WesVar (Westat, 2000), which calculates jackknife standard errors for estimates such as mean scores and percentages. Standard errors are calculated using a repeated replication technique (called the jackknife) which takes into account the clustered nature of the sample design.[4] If a distribution of scores is assumed to be normally distributed, a 95% confidence interval for a mean score (consisting of 1.96 standard errors below the mean to 1.96 standard errors above the mean) can be constructed such that, if the sampling procedure were repeated a large number of times, and the sample statistic recomputed each time, the confidence interval would be expected to contain the population estimate 95% of the time.

In assessing the significance of differences between mean scores, Bonferroni's procedure (Dunn, 1961) was used to adjust the alpha levels for multiple comparisons. This involved dividing alpha (set at .05 in this study) by the number of comparisons to be made. The critical value (t) associated with the adjusted alpha was then identified in a statistical table of such values, using the number of degrees of freedom corresponding to the number of variance strata associated with the jackknife method of variance estimation employed by WesVar. Inset 3.1 (on the next page) explains how to identify significant differences in the multiple comparison tables you will encounter throughout this report.

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[4] Other methods, such as jackknife 2 and Balanced Repeated Replication require an exact number of Primary Sampling Units (schools) in each stratum – a condition not met in the current study, as there was an uneven number of schools at the Third and Sixth class levels. The final jackknife zone at each of these levels consisted of 3 PSUs. According to Levy and Lemeshow (1999), 'empirical studies have found that no [Jackknife] method has performed consistently better than others and that each method can provide reasonably reliable variance estimates, provided that the sample sizes are sufficiently large' (p. 382).

Inset 3.1. Interpreting Tables of Differences in Mean Achievement

Throughout this report, you will see tables showing differences between the mean achievement scores of different groups of pupils. In the example below, the **%T** column shows the percentage of the *total* number of pupils who completed the DSRT, by grade level, who belong to the Traveller or settled communities, or for whom this information is missing. Using First class as an example, information about membership of the Traveller or settled communities is not known for 2.3% of the total number of pupils who completed the DSRT. **%A** shows the percentages, based on the numbers of pupils for whom DSRT and data on this item are *available*. 'Missing' now equals 0%, while 97.2% of First class pupils (for whom information is available) are members of the settled community.

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Travellers	2.7	2.8	88.0	1.05	2.8	2.9	87.7	2.61	2.3	2.4	85.9	1.46
Settled	95.0	97.2	100.5	0.77	94.7	97.1	100.4	1.06	92.3	97.6	100.2	0.74
Missing	2.3	0.0	93.0	2.03	2.5	0.0	97.0	2.86	5.4	0.0	100.9	1.87
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Settled-Travel	12.5	1.30	**9.5**	**15.5**	12.7	2.82	**6.1**	**19.3**	14.3	1.64	**10.5**	**18.1**
Missing-Travel	5.0	2.29	-0.4	10.4	9.3	3.87	**0.2**	**18.4**	15.0	2.37	**9.4**	**20.6**

Mean shows the average reading achievement scores for pupils in each category, by grade level. In the example above, First class pupils who are members of the Traveller community score an average of 88.0, compared to a mean score of 100.5 amongst of pupils in the settled community, and 93.0 amongst those whose membership of the Traveller or settled community is unknown. **SE** shows standard errors corresponding to the adjacent mean scores (e.g., the standard error of the mean score of First class pupils from the settled community is 0.77). The SE of a mean score is an estimate of the extent to which the score may be expected to vary about the 'true' mean. It is a measure of the accuracy of mean scores.

The second part of each table compares the various mean scores. In the example, there are two comparisons for each class. The first (**Sett-Trav**) compares the mean scores of pupils in the settled and Traveller communities. In First class, the difference (**Diff**) between these means is 12.5 points, and the standard error of the difference (**SED**) for this comparison is 1.30. The SED is used to construct a *confidence interval* around the mean score difference such that, if the sampling procedure were repeated, and multiple mean score differences were obtained, the mean score difference in the population would fall into this interval 95% of the time. The **95%BCI** (95% Bonferroni Confidence Interval) around the mean score difference of 12.5 is 9.5 to 15.5. In the table, these numbers are in bold, indicating that the difference between mean scores is statistically significant. Differences are significant only when the upper and lower confidence intervals are both below or both above zero. The term 'Bonferroni' in 95%BCI indicates that an adjustment for multiple comparisons has been made (see text).

In the comparisons above, Traveller children constitute the reference category, as the performance of pupils in this category is compared to the performance of children in each of the other available categories (i.e., settled, missing).

Pearson correlation coefficients (r) were obtained using the square roots of the coefficient of determination (R^2) for the linear regression between a pair of variables (e.g., socioeconomic status and reading performance). Significance was determined by referring to the significance of the *t* statistic for the predictor variable, which was obtained by dividing r by its standard error. The corresponding p. value was obtained from a table of critical values of t, using 33 (Third and Sixth class) or 34 (First class) degrees of freedom (an approximation based on number of variance strata in the jackknife method, which varied by grade level). Inset 3.2 (below) explains how to interpret correlation coefficients.

Inset 3.2. Interpreting Correlation Coefficients

In several chapters in this report, correlations between pairs of variables are given. Values of the correlations can range from –1 to +1. A negative correlation (e.g., –.24) means that as one variable increases in magnitude, the other decreases, whereas a positive correlation (e.g., +.24) means that both increase or decrease together. A value of 0 indicates no association between two variables. The closer that *r* is to ±1, the stronger the relationship between the variables. In this report, the magnitudes of correlations are assigned qualitative labels to assist in interpretation:

– weak	<± .1
– weak to moderate	± .1 to .24
– moderate	±.25 to .39
– moderate to strong	± .4 to .55
– strong	±.56 or greater

If the correlation between an explanatory variable (e.g., socioeconomic status) and a response variable (e.g., reading achievement) is .24, then a one standard deviation increase in socioeconomic status is associated with an increase in reading achievement that is the product of its standard deviation and the correlation coefficient. If the standard deviation for reading is 15, then this increase in reading achievement is estimated to be 3.6 points (15 X .24). Moreover, the relationship is symmetric, implying that a standard deviation increase in reading is associated with an increase in the socioeconomic status that is the product of its standard deviation and the correlation coefficient.

A distinction should be made between correlation coefficients that are significant, and those that represent a substantive relationship between variables. For example, a correlation of .04 between two variables, although it may be *statistically* significant, is unlikely to be *substantively* significant.

4. Achievement Outcomes

This chapter is divided into four sections. First, the performance of pupils in the Literacy Survey on the *Drumcondra Sentence Reading Test* (DSRT) in 2003 is compared with the performance of pupils who participated in the standardisation of the DSRT in 2002. Second, a rescaling of the DSRT, based only on the performance of pupils in the Literacy Survey, is described and baseline data against which to judge the progress in reading of pupils in designated schools in future surveys are presented. Third, teachers', parents' and pupils' estimates of achievement in reading and related areas are presented and compared to the pupils' DSRT scores. Fourth, correlations between ratings of pupils' achievements and their DSRT scores are reported.

Comparing Performance Across Two Studies

Scores on the DSRT were estimated for pupils in the Literacy Survey using the item parameters, weighted means and standard deviations for the relevant forms of the test from the DSRT Standardisation Study. This facilitated a comparison of the performance of pupils in the Literacy Survey – all of whom attended designated disadvantaged schools – with that of pupils in the Standardisation Study who were drawn from both designated and non-designated schools (in proportion to their representation in the population). The comparison consists of three parts: mean achievement scores across the two studies; the proportions of pupils in the two studies scoring at or below key benchmarks, including the 10th and 90th percentiles; and, the reading development of cohorts of pupils in the two studies between First and Sixth classes.

Overall Performance

The overall performance of pupils in the two studies is reported in terms of raw scores, percent correct scores and scale scores. The mean raw scores reflect the average number of items answered correctly by pupils. For example, in First class, pupils in the Standardisation Study answered an average of 25 items correctly, while pupils in the Literacy Survey answered 19 (Table 4.1). The percentage correct scores reported in Table 4.1 indicate the numbers of correctly answered items as a proportion of the total number of items on the test (40 at each level). The average percentage correct scores for pupils in First class in the Standardisation Study and the Literacy Survey are 62% and 47%, respectively.

Table 4.1: Mean DSRT raw scores and percent correct scores for pupils in the Standardisation Study and Literacy Survey, by grade level

Class Level	Score	Standardisation Study (2002)			Literacy Survey (2003)		
		Mean	SD	SE	Mean	SD	SE
1st	Raw Score	24.9	10.99	0.69	18.8	10.74	0.54
	Percent Correct	62.1	27.46	1.71	47.0	23.84	1.36
3rd	Raw Score	27.5	8.58	0.40	21.0	9.33	0.63
	Percent Correct	68.8	21.44	1.01	52.5	23.31	1.59
6th	Raw Score	23.3	8.07	0.44	18.2	7.90	0.37
	Percent Correct	58.3	20.17	1.10	45.4	19.74	0.93

Standardisation Study: 1st Class: N = 1109; 3rd Class: N = 1069; 6th Class = 1071. All Form A.
Literacy Survey: 1st Class: N = 2200; 3rd Class: N = 2120; 6th Class = 2141

The mean scale scores for pupils in the Standardisation Study were set at 100 (and the corresponding standard deviations at 15) at each class level. In First class, the average scale score for pupils in the Literacy Survey was 91 points, almost three-fifths of a standard deviation lower than the mean score of pupils in the Standardisation Study. At the Third and Sixth class levels, differences of 11 points (seven-tenths of a standard deviation), and 10 points (two-thirds of a

standard deviation) were observed. As shown in Table 4.2, at each of the three grade levels, the mean scale score achieved by pupils in the Literacy Survey was statistically significantly lower than the corresponding mean score of pupils in the Standardisation Study. The table gives the 95% Bonferroni adjusted confidence intervals around each mean score difference. Inset 3.1 (p.33) provides a detailed explanation of the derivation of confidence intervals and their interpretation.

Table 4.2: Mean scale scores[1] and scale score differences between pupils in the Standardisation Study and Literacy Survey, by grade level

	1st				3rd				6th			
	N	Mean	SD	SE	N	Mean	SD	SE	N	Mean	SD	SE
Std Study	1109	100.0	15.00	0.96	1069	100	15.00	0.67	1071	100.0	15.00	0.79
Lit Survey	2200	91.6	14.97	0.76	2120	89.0	15.62	1.07	2141	90.4	14.60	0.71
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Std Study - LS	8.4	1.22	**5.9**	**10.9**	11.0	1.44	**8.1**	**13.9**	9.6	1.19	**7.2**	**12.0**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Performance at Key Benchmarks

Mean scale scores at five key benchmarks – the 10th, 25th, 50th, 75th and 90th percentiles – were computed for pupils in the Standardisation Study. Then, the percentages of pupils at or below these benchmarks were computed for both the Standardisation Study and the Literacy Survey. Twenty-seven percent of First class pupils in the Literacy Survey scored at or below the 10th percentile, compared to 10% in the Standardisation Study (Table 4.3). Similarly, while 90% of First class pupils in the Standardisation Study scored at or below 90th percentile, 96% of pupils in the Literacy Survey achieved scores below this benchmark. At the Third and Sixth class levels, 30% and 27% of pupils, respectively, scored at or below the 10th percentile, again indicating the comparatively poorer performance of pupils in the Literacy Survey at the lower end of the distribution of scale scores. At both of these class levels, 97% of pupils scored at or below the 90th percentile, again indicating proportionately fewer very high achievers in designated schools.

Table 4.3: Percentages of pupils in the Standardisation Study and Literacy Survey at or below key markers on the Standardisation Study Scales

Class Level	Percentile	Cut-off point/SE	Standardisation Study		Literacy Survey	
			% Pupils	SE	% Pupils	SE
1st	≤ 10th	80.2 (0.85)	9.9	1.50	26.7	1.96
	≤ 25th	86.6 (1.10)	24.9	2.37	43.4	2.44
	≤ 50th	101.0 (1.29)	49.3	2.68	71.4	2.30
	≤ 75th	112.6 (0.84)	75.0	2.34	90.2	0.79
	≤ 90th	119.5 (1.04)	89.6	2.03	95.9	0.78
3rd	≤ 10th	79.8 (1.14)	9.8	1.06	29.5	2.83
	≤ 25th	89.8 (1.10)	24.8	2.17	52.5	3.07
	≤ 50th	100.6 (0.75)	50.0	2.08	76.8	1.98
	≤ 75th	110.4 (0.93)	75.0	1.77	91.3	1.27
	≤ 90th	119.7 (0.67)	90.0	1.05	97.1	0.62
6th	≤ 10th	80.4 (0.92)	10.0	1.08	27.2	1.86
	≤ 25th	89.8 (0.88)	24.9	2.06	50.1	2.08
	≤ 50th	100.2 (0.88)	50.0	2.60	74.4	1.57
	≤ 75th	110.3 (1.14)	75.0	2.27	90.6	1.05
	≤ 90th	119.8 (1.40)	90.0	1.46	97.2	0.56

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[1] Based on item parameters, weighted means and standard deviations from the Standardisation Study.

Reading Development Between First, Third and Sixth Class

In the course of standardising the DSRT, a test-wide scale that incorporated all levels and forms of the test was developed (see Chapter 3). It was not possible to use the item parameters from the Standardisation Study to estimate scores of pupils in the Literacy Survey on the test-wide scale, due to limited overlap between the Third and Sixth classes. Instead, OLS (ordinary least-squares) regression analysis was used to map the raw scores of pupils at each class level in the Standardisation Study onto the test-wide scale. Conversion tables for each class level were then prepared and applied to the raw scores of pupils in the Literacy Survey. Table 4.4 gives the mean scores of pupils in First, Third and Sixth class in both the Standardisation Study and the Literacy Survey on the test-wide scale. The table confirms that the differences in achievement between pupils in the two studies are statistically significant at each of the class levels under review.

Table 4.4: Mean DSRT test-wide scale scores of pupils in the Standardisation Study and Literacy Survey, by class level

	1st				3rd				6th			
	N	Mean	SD	SE	N	Mean	SD	SE	N	Mean	SD	SE
Std Study	1109	370.8	86.84	5.37	1069	501.1	57.64	2.61	1071	592.3	62.61	3.37
Lit Survey	2200	323.0	84.94	4.29	2120	457.6	62.66	4.26	2141	552.3	61.29	2.89
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Std Study - LS	47.8	6.87	**33.8**	**61.8**	43.5	5.00	**33.3**	**53.7**	40.0	4.44	**31.0**	**49.0**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Figure 4.1 illustrates the pattern of mean scores differences between pupils in the two studies. The progression in achievement is remarkably similar for pupils in both studies; it appears that differences that emerge in First class between pupils in the Standardisation Study and the Literacy Survey persist through Sixth class. It should be noted that Figure 4.1 does not tell us about variation in growth patterns within schools or clusters of schools, which may depart from the overall trend observed.

Figure 4.1: Mean DSRT Test-wide Scale Scores of Pupils in the Standardisation Study and Literacy Survey, by Class Level
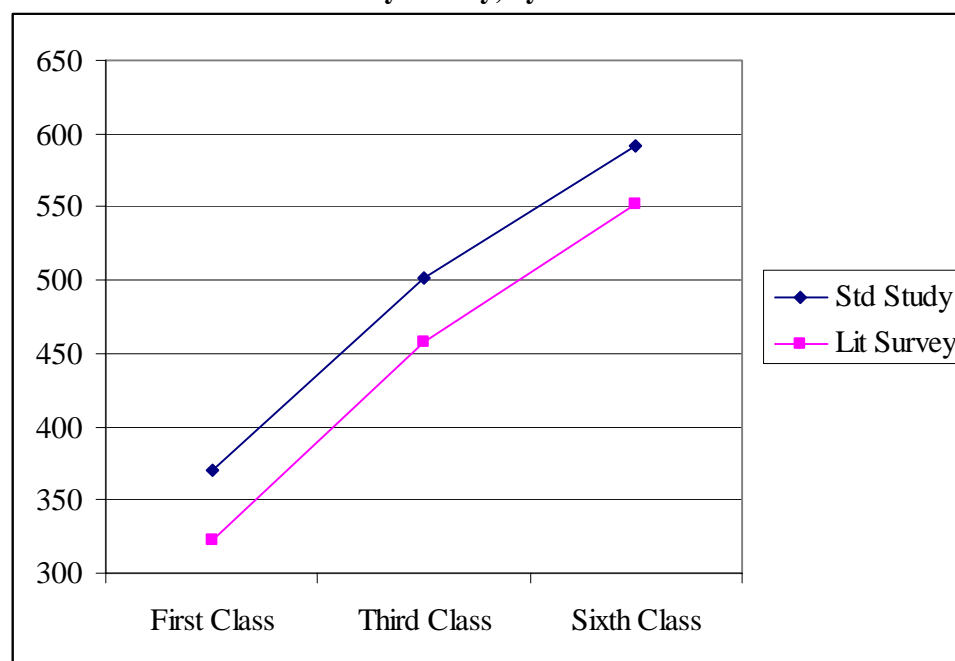
New Scales for the Literacy Survey

The first section of this chapter looked at the performance of pupils in the Literacy Survey relative to their counterparts in the Standardisation Study. This section presents data on the performance of pupils in the Literacy Survey relative to one another. At each of the class levels of interest, pupils' scores were scaled using IRT methodology to have a mean of 100 and a standard deviation of 15 (see Chapter 3). Table 4.5 gives the standard deviations and standard errors associated with the new mean scale scores. Throughout the remainder of this report, analyses are based on the re-scaled achievement data, unless otherwise indicated.

Table 4.5: Weighted mean raw scores, percent correct scores and rescaled DSRT scores, by class level

		N	Mean	SD	SE
1st	Raw Score	2200	18.8	10.74	0.54
	Percent Correct	2200	47.0	23.84	1.36
	Scale Score	2200	100.0	15.00	0.77
3rd	Raw Score	2120	21.0	9.33	0.63
	Percent Correct	2120	52.5	23.31	1.59
	Scale Score	2120	100.0	15.0	1.03
6th	Raw Score	2141	18.2	7.90	0.37
	Percent Correct	2141	45.4	19.74	0.93
	Scale Score	2141	100.0	15.0	0.73

The following is an example of the effects of re-scaling on the scale scores of pupils in the Literacy Survey. Using the Standardisation Study scales, a First class pupil in the Literacy Survey who obtained a raw score of 16 achieved a scale score of 89. The same pupil obtained a scale score of 97 on the new scale. Hence, while the pupil's score is two-thirds of a standard deviation below the mean on the scale for the Standardisation Study, it is one fifth below on the new scale. Table 4.6 provides baseline data on the performance of pupils at key benchmarks, data which can be used to track changes in achievement if the current survey is repeated at some future time. For example, in a future survey, the score of pupils at the 10th percentile in First class can be compared to that of pupils in the present survey, to determine the significance of any observed difference.

Table 4.6: Literacy Survey pupils' scores on the Rescaled DSRT at Key Markers

Class level		Percentile Rank				
		10th	25th	50th	75th	90th
First class	Scale Score	81.6	88.3	97.8	111.0	121.2
	Standard Error	0.76	0.79	1.14	1.25	0.69
Third class	Scale Score	79.9	89.4	99.7	110.5	119.4
	Standard Error	1.33	1.50	1.46	0.85	1.18
Sixth Class	Scale Score	80.8	88.8	99.4	110.5	119.8
	Standard Error	0.69	0.88	0.92	0.58	1.20

Ratings of Pupils' Achievements in English

This section is divided into four parts. First, teachers' ratings of the current functioning of pupils in the Literacy Survey in various aspects of English are considered. Second, teachers' ratings of pupils' future functioning in English reading are examined. Third, parents' ratings of their children's achievements in English are presented. Fourth, pupils' self-ratings of their achievements in English are given.

Teacher Ratings of Pupils' Current Achievements

A number of items on the Pupil Rating Form, which teachers were asked to complete in respect to each pupil in their class(es), asked about pupils' current functioning in different aspects of language and literacy. Teachers were asked to rate pupils in respect of proficiency in oral language, English reading, English writing, punctuation, spelling, phonemic awareness, sight word vocabulary (First class only), pronunciation of unfamiliar words (Third and Sixth classes only), and comprehension of text (Third and Sixth classes only). The scale used by teachers to rate pupils on these variables consisted of four points: advanced, proficient, basic and weak. Specific guidance on the meanings of these terms was not given. However, teachers were advised to implement their ratings with respect to the standards they would expect of pupils at the same class level nationally.

Teachers' ratings for oral language, reading and writing are given in Tables 4.7 to 4.9, respectively. In oral language, 63% of pupils in First class are considered to be either 'Advanced' or 'Proficient'. The corresponding estimates for reading and writing in First class are 57% and 50% respectively. At Third class, 61% of pupils are considered to be 'Advanced' or 'Proficient' in oral language, 58% in reading, and 47% in writing. At Sixth class, the corresponding estimates are 49%, 47% and 49% respectively. Hence, fewer pupils in Sixth class are considered to be 'Advanced' or 'Proficient' than in First or Third class.

Ten percent of pupils in First class, 9% in Third, and 8% in Sixth are judged to be weak in oral language. Between 11% (Sixth class) and 17% (First class) of pupils are considered to be 'Weak' at reading. Where writing (composition) is concerned, between 19% (First and Sixth classes) and 22% (Third class) are regarded as 'Weak'. Hence, across class levels, nearly twice as many children are rated as 'Weak' in writing as in oral language. Reading falls between oral language and writing in terms of the proportion of 'Weak' readers identified by teachers at each class level.

The data show that teacher ratings of achievement are associated with pupils' performance on the DSRT. In the case of oral language, for example, at all three class levels, pupils rated as proficient by their teachers have significantly higher mean scores than those rated as basic, and significantly lower mean scores than those rated as advanced (Table 4.7).

In order to develop a summary measure for each pupil using the language and literacy ratings provided by his/her teacher, a principal components analysis was conducted at each class level, and factor scores were generated for pupils so that the weighted mean was 0 and the weighted standard deviation 1. At each level, just one component had an eigen value greater than 1 so that the factor solutions were not rotated. These factor scores are referred to in a later section of this chapter, where correlations between teacher, parent and pupil ratings, and performance on the DSRT are given.

Table 4.7: Teacher ratings of pupils' oral language by proficiency level, and mean reading achievement scores, by class level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Advanced	12.9	13.1	116.5	1.18	16.6	17.0	114.5	1.09	15.7	16.5	114.3	1.51
Proficient	49.1	49.8	102.1	0.10	43.5	44.4	102.8	0.99	43.0	45.4	102.5	0.78
Basic	26.7	27.1	93.0	0.77	29.0	29.6	92.4	1.23	28.4	30.0	91.5	0.65
Weak	9.8	9.9	87.7	1.08	8.8	9.0	84.8	0.93	7.7	8.2	86.4	1.89
Missing	1.4	0.0	94.3	3.70	2.0	0.0	95.5	2.65	5.1	0.0	102.6	2.18
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Advan-Profic	14.4	1.18	**11.4**	**17.4**	11.7	1.47	**7.8**	**15.6**	11.8	1.70	**7.3**	**16.3**
Basic-Profic	-9.1	0.78	**-11.1**	**-7.1**	-10.4	1.58	**-14.6**	**-6.2**	-11.0	1.02	**-13.7**	**-8.3**
Weak-Profic	-14.4	1.08	**-17.2**	**-11.6**	-18.0	1.36	**-21.6**	**-14.4**	-16.1	2.04	**-21.5**	**-10.7**
Missing-Profic	-7.8	3.70	-17.3	1.7	-7.3	2.83	-14.8	0.2	0.1	2.32	-6.0	6.2

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 4.8: Teacher ratings of pupils' reading by proficiency level, and mean reading achievement scores, by class level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Advanced	15.5	15.7	119.0	0.90	19.0	19.4	114.4	1.13	18.1	19.1	114.7	1.21
Proficient	41.1	41.6	103.2	1.10	37.3	38.1	104.0	0.98	38.9	40.9	102.7	0.81
Basic	25.7	26.0	92.3	0.83	26.2	26.8	93.42	1.08	27.0	28.4	92.2	0.74
Weak	16.5	16.7	86.6	0.56	15.5	15.8	84.09	0.86	11.0	11.6	84.4	1.02
Missing	1.2	0.0	91.7	2.90	2.0	0.0	96.98	2.84	5.1	0.0	102.4	2.25
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Advan-Profic	14.4	1.18	**11.3**	**17.5**	10.4	1.49	**6.4**	**14.3**	12.0	1.46	**8.2**	**15.8**
Basic-Profic	-9.1	0.78	**-11.1**	**-7.1**	-10.6	1.46	**-14.5**	**-6.8**	-10.5	1.10	**-13.4**	**-7.6**
Weak-Profic	-14.4	1.08	**-17.3**	**-11.5**	-20.0	1.31	**-23.4**	**-16.5**	-18.3	1.30	**-21.7**	**-14.9**
Missing-Profici	-7.8	3.70	-17.5	1.9	-7.06	3.00	-15.0	0.9	-0.3	2.39	-6.6	6.0

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 4.9: Teacher ratings of pupils' writing by proficiency level, and mean reading achievement scores, by class level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Advanced	9.8	9.9	117.6	1.44	12.8	13.0	115.7	1.03	13.2	13.9	114.6	1.33
Proficient	38.7	39.3	105.9	1.01	33.3	34.0	107.0	1.01	33.0	34.8	105.4	0.79
Basic	31.6	32.1	94.8	0.78	30.3	30.9	96.1	1.00	31.1	32.8	95.2	0.84
Weak	18.4	18.7	87.9	0.65	21.7	22.1	85.8	0.83	17.5	18.5	86.5	1.15
Missing	1.6	0.0	92.7	2.41	2.0	0.0	96.8	2.86	5.2	0.0	103.1	1.93
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Advan-Profic	11.7	1.76	**7.1**	**16.3**	8.7	1.44	**4.9**	**12.5**	9.2	1.55	**5.1**	**13.3**
Basic-Profic	-11.1	1.28	**-14.5**	**-7.7**	-10.9	1.42	**-14.7**	**-7.2**	-10.2	1.15	**-13.2**	**-7.2**
Weak-Profic	-18.0	1.20	**-21.2**	**-14.8**	-21.3	1.31	**-24.7**	**-17.8**	-18.9	1.40	**-22.6**	**-15.2**
Missing-Profic	-13.2	2.61	**-20.1**	**-6.3**	-10.22	3.03	**-18.2**	**-2.2**	-2.3	2.09	-7.8	3.2

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Teacher Expectations of Pupils' Future Functioning

As well as providing ratings on their pupils' current achievements in language and literacy, teachers indicated how well they expected their pupils to cope with reading in the future. Teachers of First class pupils were asked to respond with reference to pupils' likely performance on reading tasks in Third class, while teachers of Third and Sixth class pupils were asked to respond with reference to reading tasks at post-primary school, and the everyday demands of society in reading.

Teachers indicated that almost 5% of First class pupils would not be able to cope at all with reading tasks in Third class, and that a further 25% would need assistance (Table 4.10). Teachers of pupils in Third class indicated that about 4% would not be able to cope at all with the reading tasks of post-primary schools, while a further 24% would need help (Table 4.11). The corresponding estimates at Sixth class were 3% and 22% respectively. Pupils identified as not being not likely to cope at all with future reading tasks did less well than pupils deemed likely to cope adequately with such tasks (Tables 4.11, 4.12). The difference in DSRT mean scores at each grade level was at least a standard deviation, rising to 22 points (1.5 standard deviations) amongst Sixth class pupils. Third and Sixth class pupils were also rated on how they would be expected to cope with the everyday demands of society in reading. Just under 2% of pupils at each grade level were regarded as being unlikely to cope at all (Table 4.12). These pupils achieved mean scores that were, on average, more

than one standard deviation lower than the mean scores of pupils whose teachers rated them as likely to cope adequately.

Table 4.10: Teacher ratings of how pupils in First class will be able to cope with reading demands of Third class, and mean reading achievement scores

	%T	%A	Mean	SE
Will cope very well	27.8	28.3	113.8	1.04
Will cope adequately	40.5	41.1	99.6	0.86
Will need assistance	25.4	25.8	89.3	0.74
Will not cope at all	4.7	4.8	83.8	1.10
Missing	1.6	0.0	89.7	2.55
Comparisons	Diff	SED	95% BCI	
Very well-Adequate	14.2	1.35	**10.6**	**17.8**
Will need assistance-Adequate	-10.3	1.13	**-13.3**	**-7.3**
Will not cope at all-Adequate	-15.8	1.40	**-19.5**	**-12.1**
Missing-Adequate	-9.9	2.69	**-17.0**	**-2.8**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 4.11: Teacher ratings of how pupils in the Third and Sixth classes will be able to cope with reading tasks in post-primary school, and mean achievement scores

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Will cope very well	30.3	31.0	112.5	0.80	31.3	32.7	111.5	1.07
Will cope adequately	40.1	41.0	99.5	0.10	39.5	41.4	99.3	0.61
Will need assistance	23.5	24.0	88.3	1.11	21.9	23.0	87.3	0.75
Will not cope at all	3.9	4.0	80.3	1.16	2.9	3.0	80.4	1.14
Missing	2.1	0.0	97.0	2.74	4.4	0.0	100.0	4.15
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
Very well-Adequate	13.0	0.81	**10.9**	**15.1**	12.2	1.23	**9.0**	**15.4**
Will need assistance-Adequate	-11.2	1.11	**-14.1**	**-8.3**	-12.0	0.97	**-14.6**	**-9.4**
Will not cope at all-Adequate	-19.2	1.16	**-22.3**	**-16.1**	-18.9	1.29	**-22.3**	**-15.5**
Missing-Adequate	-2.5	2.74	-9.7	4.7	0.7	4.19	-10.4	11.8

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 4.12: Teacher ratings of how pupils in the Third and Sixth classes will cope with the everyday demands of society in reading, and mean achievement scores

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Will cope very well	34.2	34.9	111.2	0.96	34.8	36.4	110.2	1.05
Will cope adequately	44.5	45.5	97.6	0.93	44.9	46.9	97.4	0.64
Will need assistance	17.5	17.9	86.5	1.34	14.1	14.8	85.3	0.89
Will not cope at all	1.7	1.7	81.4	1.38	1.9	2.0	80.9	1.29
Missing	2.1	0.0	96.4	2.72	4.3	0.0	100.9	3.62
Comparisons	Diff	SED	95% BCI*		Diff	SED	95% BCI	
Very well-Adequate	13.6	1.34	**10.1**	**17.1**	12.8	1.23	**9.6**	**16.0**
Will need assistance-Adequate	-11.1	1.63	**-15.4**	**-6.8**	-12.1	1.10	**-15.0**	**-9.2**
Will not cope at all-Adequate	-16.2	1.66	**-20.6**	**-11.8**	-16.5	1.44	**-20.3**	**-12.7**
Missing-Adequate	-1.2	2.87	-8.8	6.4	3.5	3.68	-6.2	13.2

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Parent Ratings of Children's Achievements in English

Parents were asked to provide ratings of their child's achievement in English reading, writing, spelling and ability to understand words, using a 3-point scale – 'Very good', 'Ok' and 'Not great'. The percentages of parents rating their children as 'Very good' at reading ranged from 64% in First class to 67% in Sixth class (Table 4.13). At each grade level, about 6% of parents were of the view that their child was 'Not great' at reading. There is a clear association between the ratings given by parents to their children, and the scores achieved by the children on the DSRT. At each grade level, children who were rated 'Very good' had a significantly higher mean score than children rated as 'Ok'. Similarly, at each level, those rated as 'Ok' had a higher average mean score than those rated as 'Not great'.

Children whose reading was not rated by their parents, either because the parents did not complete the questionnaire, or because they left the relevant item blank (12% in First and Third classes, and 15% in Sixth class), achieved mean scores that were not statistically different from the mean scores of pupils rated as 'Ok' by their parents. Indeed, the difference between these pairs of mean scores did not exceed 1 score point at any of the three grade levels.

Table 4.13: Parent ratings of pupils' English reading and mean reading achievement scores, by class level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Very good	56.4	63.7	106.6	0.83	56.0	63.6	106.3	1.07	56.8	66.6	105.4	0.77
Ok	26.5	29.9	92.3	0.70	26.2	29.8	93.3	1.06	23.2	27.2	93.5	0.70
Not great	5.5	6.2	86.4	0.92	5.8	6.6	84.9	1.31	5.2	6.2	86.14	1.15
Don't know	0.2	0.2	83.0	4.82	0.0	0.0	-	-	0.0	0.0	94.08	0
Missing	11.5	0.0	92.2	1.29	12.0	0.0	92.4	1.35	14.8	0.0	94.23	1.47
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
V.G-Ok	14.3	1.09	**11.4**	**17.2**	13.0	1.51	**9.2**	**16.8**	11.9	1.04	**9.2**	**14.6**
Not great-Ok	-5.9	1.16	**-8.9**	**-2.9**	-8.4	1.69	**-12.6**	**-4.2**	-7.4	1.35	**-10.9**	**-3.8**
Don't know-Ok	-9.3	4.87	-22.1	3.5	-	-	**-**	**-**	0.6	0.70	**-1.3**	**2.4**
Missing-Ok	-0.1	1.47	-4.0	3.8	-0.9	1.72	-5.2	3.4	0.7	1.62	-3.5	5.0

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Parents also rated their child's ability to understand word meanings. Just over one half of children at each class level were rated as being 'Very good' at understanding word meanings, while 6% in First class, and 8% in the Third and Sixth classes were rated as being 'Not great' (Table 4.14). There is an association between parent ratings of children's ability to understand word meanings and the children's performance on the DSRT. At each class level, children who are rated as 'Very good' have a mean score that is about two-thirds of a standard deviation higher than that of children rated as 'Ok'. The differences in mean reading achievement scores between children whose reading was rated as 'Ok' and those whose reading was rated as 'Not great' is about one-third of a standard deviation at each class level.

Parents also rated their children with respect to ability in English writing. Almost half of pupils in First and Third classes were rated as 'Very good', while 56% of children in Sixth class received this rating (Table 4.15). Fewer than 10% of children at each class level were rated as 'Not great'. Mean score differences in reading achievement between pupils rated as 'Very good' and 'Ok' were statistically significant and consistent in size across class levels (between 6 and 7 points). The difference in mean reading achievement between children rated 'Ok' and those rated as 'Not great' was statistically significant at the Third and Sixth class levels, but not at First class.

Table 4.14: Parent ratings of children's ability to understand word meanings, and mean achievement scores, by class level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Very good	46.3	52.6	106.4	0.84	45.7	52.7	107.1	1.06	44.3	52.4	107.2	0.86
Ok	36.2	41.1	96.1	0.83	33.2	38.2	95.9	1.02	32.8	38.8	95.4	0.57
Not great	5.1	5.8	89.8	0.98	7.7	8.8	88.4	1.12	7.1	8.4	88.6	1.25
Don't know	0.4	0.4	90.5	7.63	0.3	0.3	78.3	3.33	0.3	0.4	78.1	2.75
Missing	12.0	0.0	91.7	1.16	13.1	0.0	92.9	1.18	15.6	0.0	94.9	1.42
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
V.G-Ok	10.3	1.18	**7.2**	**13.4**	11.2	1.47	**7.3**	**15.1**	11.8	1.03	**9.1**	**14.5**
Not great-Ok	-6.3	1.28	**-9.7**	**-2.9**	-7.5	1.51	**-11.5**	**-3.5**	-6.8	1.37	**-10.4**	**-3.2**
Don't know-Ok	-5.6	7.68	-25.8	14.6	-17.6	3.48	**-26.8**	**-8.4**	-17.3	2.81	**-24.7**	**-9.9**
Missing-Ok	-4.4	1.43	**-8.2**	**-0.6**	-3.0	1.56	-7.1	1.1	-0.5	1.53	-4.5	3.5

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 4.15: Parent ratings of children's English writing, and mean reading achievement scores, by class level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Very good	43.0	48.9	104.5	0.86	42.6	49.1	105.1	1.01	47.1	55.8	104.3	0.88
Ok	37.9	43.0	98.8	0.74	36.6	42.2	98.3	1.38	29.7	35.2	97.6	0.78
Not great	7.0	7.9	92.9	1.18	7.5	8.6	93.0	1.40	7.4	8.8	93.1	1.44
Don't know	0.2	0.2	86.4	6.05	0.1	0.1	90.5	1.41	0.1	0.1	100.6	3.31
Missing	11.9	0.0	92.1	1.17	13.2	0.0	92.4	1.19	15.7	0.0	95.0	1.38
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
V.G-Ok	5.7	1.13	**2.7**	**8.7**	6.8	1.71	**2.3**	**11.3**	6.7	1.18	**3.6**	**9.8**
Not great-Ok	-5.9	1.39	-9.6	-2.2	-5.3	1.97	**-10.5**	**-0.1**	-4.5	1.64	**-8.8**	**-0.2**
Don't know-Ok	-12.4	6.10	-28.4	3.6	-7.8	1.97	**-13.0**	**-2.6**	3.0	3.40	**-6.0**	**12.0**
Missing-Ok	-6.7	1.38	-10.3	-3.1	-5.9	1.82	-10.7	-1.1	-2.6	1.59	-6.8	1.6

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Pupils' Self-ratings of Their Achievements in English

A question on the Pupil Questionnaire invited pupils to rate their own achievements in several aspects of English, including reading, spelling and writing. In First class, pupils were asked to rate themselves as 'Very good', 'Ok' or 'Not so good'. In the Third and Sixth classes, pupils were asked to compare their achievement with that of their class mates, and rate themselves as 'Better than most', 'About the middle of the class', and 'Not as good as most'.

Seventy percent of pupils in First class rated themselves as 'Very good' at English reading, 24% viewed themselves as 'Ok', while 6% indicated that they were 'Not so good' (Table 4.16). Pupils who rated themselves as 'Very good' had a mean score that was significantly higher (by over one third of a standard deviation) than the mean score of pupils who rated themselves as 'Ok'. The latter group achieved a mean score that was significant higher (by just under one third of a standard deviation) than the mean score of pupils who rated themselves as 'Not so good.'

Thirty-nine percent of pupils in Third class, and 29% in Sixth class rated themselves as being 'Better than most' of their classmates at reading, while 18% in Third class, and 19% in Sixth considered themselves to be 'Not as good' as their classmates (Table 4.17). At both class levels, pupils rating themselves at the top point on the scale ('Better than most') outperformed those who rated themselves as being at the middle point, while those at the middle outperformed those who

rated themselves at the lowest point ('Not as good'). Differences between groups varied by class level, with the largest difference (four-fifths of a standard deviation) occurring between pupils in Sixth class who rated themselves 'Better than most' and those who rated themselves 'About the middle'. At both Third and Sixth class levels, differences between pupils rating themselves as 'About the middle', and pupils who were missing, were not statistically significant.

Table 4.16: First class pupils' self-ratings of reading, and mean achievement scores

	%T	%A	Mean	SE
Very good	69.3	70.2	102.2	0.86
Ok	24.0	24.3	96.1	0.93
Not so good	5.5	5.6	91.9	1.20
Missing	1.2	0.0	88.8	2.37
Comparisons	Diff	SED	95% BCI*	
Very good-Ok	6.1	1.27	**2.9**	**9.3**
Not so good-Ok	-4.2	1.52	**-8.0**	**-0.4**
Missing-Ok	-7.3	2.55	**-13.7**	**-0.9**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 4.17: Third and Sixth class pupils' self-ratings of reading, and mean reading achievement scores

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Better than most	37.6	38.5	105.1	1.23	28.7	29.1	110.8	0.88
About the middle	43.0	44.0	99.8	1.08	51.6	52.2	98.4	0.76
Not as good	17.2	17.6	89.4	1.05	18.5	18.7	88.2	0.70
Missing	2.2	0.0	99.2	7.04	1.1	0.0	93.3	3.32
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
Better-Middle	5.3	1.64	**1.2**	**9.4**	12.4	1.16	**9.5**	**15.3**
Not good-Middle	-10.4	1.51	**-14.2**	**-6.6**	-10.2	1.03	**-12.8**	**-7.6**
Missing-Middle	-0.6	7.12	-18.5	17.3	-5.1	3.41	-13.7	3.5

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

At First class level, 62% of pupils viewed themselves as being 'Very good' at spelling (Table 4.18). Forty-one percent of pupils in Third class, and 34% in Sixth class rated themselves as 'Better than most' of their classmates (Table 4.19). Nine percent of pupils in First class described themselves as 'Not so good' at spelling, while 16% of pupils in Third class, and 23% in Sixth class described themselves as 'Not as good' as their classmates.

Table 4.18: First Class pupils' self-ratings of spelling, and mean achievement scores

	%T	%A	Mean	SE
Very good	60.7	61.6	102.1	0.96
Ok	29.0	29.4	97.8	0.75
Not so good	8.8	8.9	94.6	1.35
Missing	1.5	0.0	89.9	2.33
Comparisons	Diff	SED	95% BCI	
Very good-Ok	4.3	1.22	**1.2**	**7.4**
Not so good-Ok	-3.2	1.54	-7.1	0.7
Missing-Ok	-7.9	2.45	**-14.1**	**-1.7**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 4.19: Pupil self-ratings of English spelling, and mean reading achievement scores, Third and Sixth Class

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Better than most	40.3	41.1	104.5	1.13	33.5	33.8	107.3	0.94
About the middle	41.8	42.7	99.8	1.28	43.2	43.6	99.3	0.79
Not as good	15.9	16.3	89.2	0.89	22.4	22.6	90.5	0.86
Missing	2.0	0.0	99.5	7.35	0.8	0.0	99.3	2.95
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
Better-Middle	4.7	1.71	**0.4**	**9.0**	8.0	1.23	**4.9**	**11.1**
Not as good-Middle	-10.6	1.56	**-14.5**	**-6.7**	-8.8	1.17	**-11.7**	**-5.9**
Missing-Middle	-0.3	7.46	-19.1	18.5	0.0	3.05	-7.7	7.7

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

At all three grade levels, differences in reading achievement between the top two groups were small but statistically significant. Whereas in First class, the difference between pupils who rated themselves as 'Ok' at spelling, and those who rated themselves as 'Not so good' was small and not statistically significant, differences between those rating themselves as 'In the middle' and 'Not so good' at the Third and Sixth classes were larger and reached statistical significance. Only in First class was there a statistically significant difference between the mean scores of those who rated themselves in the middle of the scale, and those who were 'Missing' (i.e., those who did not provide a rating).

In First class, almost two-thirds of pupils considered themselves to be 'Very good' at writing, while 7% viewed themselves as being 'Not so good' (Table 4.20). In Third class, 30% considered themselves to be 'Better than most' of their classmates, while just under one-quarter considered themselves to be 'not as good' (Table 4.21). At Sixth class level, just 21% of pupils considered themselves to be 'better' than their classmates, while 21% viewed themselves being 'Not so good'. In First class, a statistically significant difference was found between the mean scores of pupils who rated themselves as 'Ok' in writing, and those for whom self-ratings on writing were unavailable. In Sixth class, pupils who rated themselves as 'Better than most' outperformed those who rated themselves as 'About the middle', while the latter group outperformed those who rated themselves as 'Not as good'.

Across the different dimensions of language and literacy, more pupils in First class than in either Third or Sixth class rated themselves at the top point of the scale, indicating a stronger perception of their own abilities among pupils at that class level. This pattern is particularly evident in the case of English reading, where 70% of pupils in First class viewed themselves as 'Very good', whereas just 39% in Third class and 29% in Sixth class assigned themselves the top rating ('Better than most').

Table 4.20: First Class pupils' self-ratings of writing, and mean achievement scores

	%T	%A	Mean	SE
Very good	64.1	65.2	99.5	0.92
Ok	27.2	27.7	102.2	0.80
Not so good	7.1	7.2	98.2	1.46
Missing	1.6	0.0	89.5	2.28
Comparisons	Diff	SED	95% BCI	
Very good-Ok	-2.7	1.22	-5.8	0.4
Not so good-Ok	-4.0	1.66	-8.2	0.2
Missing-Ok	-12.7	2.42	**-18.8**	**-6.6**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 4.21: Pupil self-ratings of English writing, and associated mean reading achievement scores, Third and Sixth class

Rating	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Better than most	29.5	30.0	101.5	1.14	20.9	21.1	106.8	1.54
About the middle	44.2	45.0	101.6	1.07	57.4	57.8	100.3	0.69
Not as good	24.5	24.9	95.4	1.22	20.9	21.1	92.5	0.76
Missing	1.9	0.0	101.0	7.32	0.7	0.0	98.5	3.93
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
Better-Middle	-0.1	1.56	-4.0	3.8	6.5	1.69	**2.3**	**10.7**
Not good-Middle	-6.2	1.62	-10.3	-2.1	-7.8	1.03	**-10.4**	**-5.2**
Missing-Middle	-0.6	7.40	-19.2	18.0	-1.8	3.99	-11.8	8.2

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Performance Ratings in English and Reading Test Scores

This section provides correlations between the ratings of pupil performance in language and literacy provided by teachers, parents, and pupils themselves, and the pupils' performance on the DSRT. An explanation of how the correlation coefficients were calculated, and how they may be interpreted, is provided in Inset 3.2 on page 34.

Teacher Ratings and Reading Test Scores

The correlations between teacher ratings of pupils on different aspects of English (oral language, reading and writing) and DSRT scores range from .53 (oral language and DSRT scores, First class) to .70 (reading and DSRT scores, First class) (Table 4.22). Correlations are all statistically significant, and almost all can be described as 'strong' since they exceed .56. Correlations between the composite language and literacy factor scores (based on performance on a range of language and literacy processes) and DSRT scores are also strong and significant, ranging from .66 in Sixth class to .70 in Third.

Correlations between teachers' perceptions of how pupils in First class will perform in Third class and the pupils' DSRT scores are strong (.65 for reading and .61 for writing) (Table 4.22). Similarly, correlations between teachers' perceptions of how pupils in the Third and Sixth classes will perform on reading tasks in post-primary school and reading test scores are strong, as are correlations between teachers' ratings of how the same pupils will ultimately cope with the reading demands of society and the pupils' current reading test performance.

Table 4.22: Correlations between teacher ratings of pupil performance in English and DSRT scores, by class level

	1st		3rd		6th	
	r	t	r	t	r	t
Oral language	**.528**	26.7	**.580**	22.6	**.559**	14.4
Reading	**.698**	40.3	**.659**	28.4	**.626**	20.0
Writing	**.594**	25.5	**.659**	29.6	**.596**	17.6
Weighted factor score	**.681**	43.0	**.696**	30.4	**.656**	19.2
Reading tasks in 3rd	**.645**	28.1	-	-	-	-
Writing tasks in 3rd	**.611**	27.7	-	-	-	-
Reading tasks in PP[†]	-	-	**.651**	28.5	**.635**	24.0
Demands of society	-	-	**.606**	21.5	**.589**	23.3

Significant differences (p<.001) are in bold;   [†]PP = Post-primary school
For assistance in interpreting Table, see Inset 3.2 on page 34.

Parent Ratings and Reading Test Scores

The correlations between parents' ratings of their children's functioning in various aspects of English and the children's reading test scores are weaker than those between teacher ratings and test scores (Table 4.23). For ratings of reading and DSRT scores, they range from .43 (Sixth class) to .49 (First class). Correlations between ratings for understanding of words and DSRT scores range from .38 (First) to .45 (Third and Sixth) (Table 4.23). Correlations between parent ratings of writing and reading performance are moderate, ranging from .25 in First class to .28 (Third).

Table 4.23: Correlations between parent ratings of their children's performance in English and DSRT scores, by class level

Parent ratings	1st		3rd		6th	
	r	t	r	t	r	t
Reading	**.489**	20.9	**.486**	19.2	**.429**	17.2
Understanding words	**.378**	16.2	**.448**	21.4	**.453**	20.6
Writing	**.247**	12.7	**.276**	11.6	**.262**	12.2

Significant differences (p<.001) are in bold.   For assistance in interpreting Table, see Inset 3.2 on page 34.

Pupils' Self-ratings and Reading Test Scores

Correlations between pupil's self-ratings of their reading ability and their DSRT scores ranged from .22 (First class) to .52 (Sixth class) (Table 4.24). This suggests that, as pupils progress through school, they increase in their awareness of their own reading ability relative to other children in their class. Correlations between spelling and reading test scores, and between writing and reading test scores were weaker than those between reading and reading test scores. At First class level, the correlation between writing and reading test scores was negative, and not statistically significant.

Table 4.24: Correlations between pupils' self-ratings of their ability in reading, spelling and writing/storytelling, and their DSRT scores, by class level

	1st Class		3rd Class		6th Class	
	r	t	r	t	R	t
Reading ability	**.216**	9.0	**.357**	13.045	**.521**	23.6
Spelling	**.174**	6.0	**.337**	12.210	**.414**	17.3
Writing / stories	-.029	-1.1	**.144**	7.109	**.310**	9.5

Significant differences (p<.001) are in bold.   For assistance in interpreting Table, see Inset 3.2 on page 34.

5. Pupil Characteristics

This chapter explores associations between various pupil characteristics and reading achievement, as measured by the DSRT. The data described are obtained from pupil, parent and teacher responses to questionnaires. There are four main sections, the first of which outlines demographic characteristics, including gender, age, language typically spoken in the home, nationality and ethnicity. The second examines educational experiences, including pre-school attendance and engagement in homework. The next section, covering engagement with learning, includes behaviour in the school and in the classroom, reading for leisure, and receipt of supplementary support. The final section examines pupils' attitudes towards reading, and their (and their parents) aspirations and expectations for their educational attainment.

Demographic Characteristics

In this section, pupils' demographic characteristics, including gender, age, nationality, first language and membership of the Traveller community are described.

Gender

Across each of the grade levels, almost equal proportions of boys and girls completed the DSRT (Table 5.1). Amongst First and Third class pupils, girls obtained significantly higher reading achievement scores than boys. At First class, the mean score for girls is 102.1, compared with 98.0 for boys. At Third class, girls have an achievement score of 102.2 compared with 98.0 for boys. In contrast, the mean achievement score for Sixth class girls is marginally, but not statistically significantly below Sixth class boys.

Table 5.1: Mean reading achievement scores, by gender and grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Girl	48.8	48.8	102.1	1.08	47.3	47.3	102.2	1.08	50.7	50.7	99.1	0.72
Boy	51.2	51.2	98.0	0.81	52.7	52.7	98.0	1.45	49.3	49.3	100.9	1.06
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Boy - Girl	-4.1	1.34	**-6.8**	**-1.4**	-4.2	1.81	**-7.9**	**-0.5**	1.8	1.28	-0.8	4.4

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Proportionally more girls than boys are at or above the 90th percentile in First and Third class, and proportionally more boys are at or below the 10th percentile (Table 5.2). Indeed twice as many boys as girls (13% versus 6%) score at or below the 10th percentile in Third class. At Sixth class the gender difference is reversed, with more boys than girls scoring at or above the 90th percentile, and a marginally higher percentage of girls than boys scoring at or below the 10th percentile.

Table 5.2: Proportion of boys and girls at or below the 10th and at or above the 90th percentiles, by grade level

	1st		3rd		6th	
	%10th (SE)	%90th (SE)	%10th (SE)	%90th (SE)	%10th (SE)	%90th (SE)
Girl	7.8 (1.41)	10.9 (1.20)	6.2 (0.96)	11.3 (1.70)	10.1 (1.32)	8.1 (0.91)
Boy	12.0 (1.72)	9.2 (1.17)	13.4 (2.73)	8.9 (2.06)	9.8 (1.42)	12.0 (1.71)

Age

The mean age for First class pupils was 7 years and 4 months, compared to 9 years and 5 months for Third class pupils, and 12 years and 6 months for Sixth class pupils (Table 5.3). Pupils' ages ranged from as young as 6 years in First class to as old as 15 years and four months in Sixth class.

Table 5.3: Mean age of pupils, by grade level

	N	Mean	Range	Std. Dev
1st	2200	7.4	6.0 – 9.6	0.44
3rd	2119	9.4	7.8 – 11.5	0.46
6th	2141	12.5	11.2 – 15.3	0.47

Across each of the grade levels, the distribution of pupil age was divided into thirds (those within the average age range, and those younger and older than this). With the exception of one case, information for all pupils surveyed was known, and this case is excluded from comparison analyses. As can be seen from Table 5.4, First class pupils in the younger category achieve a score that is significantly lower (by one quarter of a standard deviation) than those of average age. Sixth class pupils who are in the older category achieve a significantly poorer mean score (one-third of a standard deviation) than pupils who are of average age.

Table 5.4: Mean reading achievement scores and pupil age, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Younger	33.6	33.6	97.6	0.98	33.5	33.5	99.4	1.11	33.4	33.4	100.1	0.91
Average	33.0	33.0	101.9	0.98	33.3	33.3	99.9	1.24	33.5	33.5	102.7	0.82
Older	33.3	33.3	100.5	0.89	33.2	33.2	100.7	1.14	33.1	33.1	97.2	0.96
Missing	0.0	0.0	-	-	0.1	0.0	97.8	-	0.0	0.0	-	-
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Young-Avg	-4.3	1.39	**-7.5**	**-1.1**	-0.5	1.66	-4.4	3.4	-2.6	1.22	-5.5	0.3
Old-Avg	-1.4	1.32	-4.5	1.7	0.8	1.68	-3.1	4.7	-5.5	1.26	**-8.5**	**-2.5**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Nationality

Only a small minority of pupils at each of the three grade levels was born somewhere other than Ireland or the United Kingdom (6.7% of First class, 5.3% of Third class, and 3.8% of Sixth class pupils). There were no significant differences, at any grade level, between the mean achievement scores of those born in Ireland or the UK and those born elsewhere. Pupils in Third and Sixth class who were born elsewhere were asked to indicate how old they were when they came to live in Ireland. Non-Irish born Third class pupils had spent an average of 4 years 8 months in Ireland, with some having arrived in Ireland as recently as 4 months prior to testing. Non-Irish born Sixth class pupils had been in Ireland for an average of just over 6 years. Mean achievement scores were not significantly correlated with the number of years living in Ireland, for Third ($r=.123$, $t=.123$, $p=.174$) or for Sixth ($r=0.31$, $t=-.974$, $p=.155$) class pupils.

Language Spoken in the Home

Almost all pupils (at least 94% at any grade level) spoke English when talking to their parents (Table 5.5). Between 2-3% spoke Irish with their parents, while a further 2-3% spoke another language. The proportion of pupils speaking 'other' languages was highest in First class. Language spoken was not significantly related to achievement amongst First and Third class pupils, but Sixth class English speakers achieved a mean score that was more than half a standard deviation above those who spoke a language other than English or Irish.

Table 5.5: Mean reading achievement scores, and language spoken in the home, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
English	93.3	94.2	100.1	0.80	93.7	95.4	100.3	1.05	95.7	96.4	100.2	0.74
Irish	3.2	3.2	99.8	1.51	2.2	2.2	91.9	3.91	1.6	1.6	97.4	9.03
Other	2.6	2.6	98.1	1.73	2.3	2.4	93.6	2.68	1.9	2.0	91.6	2.82
Missing	1.0	0.0	94.8	2.65	1.8	0.0	101.8	7.46	0.8	0.0	98.6	4.91
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Irish-English	-0.3	1.71	-4.6	4.0	-8.4	4.05	-18.6	1.8	-2.8	9.06	-25.6	20.0
Other-English	-2.0	1.91	-6.8	2.8	-6.7	2.88	-13.9	0.5	-8.6	2.92	**-15.9**	**-1.2**
Missing- English	-5.3	2.77	-12.3	1.7	1.5	7.53	-17.5	20.5	-1.6	4.97	-14.1	10.9

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Across all grade levels, 150 pupils (2.3%) indicated that they spoke another language with their parents. These pupils were asked to write the name of that language. Languages were categorized into the following broad geographic / political areas; Western European, African, Balkan or Eastern European, former Soviet states (excluding Balkan countries), Indian subcontinent, Arabic and Other languages. Balkan or Eastern European languages were spoken by the largest number of pupils (34), followed by European languages (25) and African languages (20). Thirteen spoke one of the languages from countries that belonged to the former Soviet Union, nine spoke languages from the Indian subcontinent, nine spoke Arabic, while the remainder spoke another language or did not indicate the language they spoke at home. Given the small numbers in each category, no substantive links with achievement can be made.

Refugee and Asylum-Seeker Status

Small minorities of pupils were identified by their teachers as refugees or asylum seekers, (ranging from 1.3% of Third class to 2.1% of First class pupils) (Table 5.6). Given the small numbers involved, it is unsurprising that the only significant difference found was amongst First class pupils, where pupils who were refugees or asylum seekers achieved a significantly lower mean score than other pupils. The difference is about one-fifth of a standard deviation.

Table 5.6: Mean achievement scores by refugee/asylum-seeker status and grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Yes	2.1	2.1	96.5	0.97	1.3	1.4	97.8	1.92	1.5	1.6	92.90	3.75
No	95.4	97.9	100.2	0.78	94.3	98.6	100.3	1.04	92.5	98.4	100.1	0.77
Missing	2.5	0.0	94.1	2.47	4.4	0.0	93.3	2.62	6.1	0.0	100.7	2.51
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
No-Yes	3.7	1.24	**0.8**	**6.6**	2.6	2.18	-2.6	7.7	7.2	3.83	-1.8	16.2
Missing-Yes	-2.4	2.65	-8.6	3.8	-4.5	3.25	-12.1	3.1	7.8	4.51	-2.8	18.4

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Membership of the Traveller Community

Just under 3% of pupils at each grade level were members of the Traveller community, and these pupils achieved significantly lower mean scores than their counterparts from the settled community (up to almost one full standard deviation) (Table 5.7). Mean score estimates for pupils who are Travellers range from 85.9 in Sixth class to 88.0 in First class, compared to approximately 100.0 for pupils from the settled community. Furthermore, pupils for whom data are unknown, also perform significantly better than pupils from the Traveller community.

Table 5.7: Mean achievement scores, by membership of the Traveller or settled community, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Travellers	2.7	2.8	88.0	1.05	2.8	2.9	87.7	2.61	2.3	2.4	85.9	1.46
Settled	95.0	97.2	100.5	0.77	94.7	97.1	100.4	1.06	92.3	97.6	100.2	0.74
Missing	2.3	0.0	93.0	2.03	2.5	0.0	97.0	2.86	5.4	0.0	100.9	1.87
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Settled-Travel	12.5	1.30	**9.5**	**15.5**	12.7	2.82	**6.1**	**19.3**	14.3	1.64	**10.5**	**18.1**
Missing-Travel	5.0	2.29	-0.4	10.4	9.3	3.87	**0.2**	**18.4**	15.0	2.37	**9.4**	**20.6**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Educational Experiences

This section explores pupils' educational experience, including pre-school experience, pupil mobility, attendance, participation in homework clubs, and participation in learning-support.

Pre-school attendance

Parents were asked if their child had attended a pre-school, and if so, whether the child had attended an Early Start or other type of pre-school. As shown in Table 5.8, 21% of First class pupils, 17% of those in Third class, and 6% of Sixth class pupils had been enrolled in Early Start[1]. Almost three-quarters (73%) of Sixth class pupils had attended a pre-school or playgroup other than Early Start, as had 67% of Third and 65% of First class pupils. At each of the three grade levels, there was no significant difference in reading achievement between those who had attended Early Start and those who had not attended any pre-school or playgroup. However, First and Third class pupils who had attended Early Start obtained significantly higher mean achievement scores than did those pupils whose parents did not respond to the item.

Table 5.8: Mean reading achievement scores and pre-school attendance, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Early Start	18.4	20.8	99.1	1.51	14.4	16.6	100.4	1.49	6.2	7.3	96.5	1.71
Pre-sch/Playg	57.3	64.7	102.2	0.85	58.1	66.9	101.9	1.13	62.3	73.3	102.1	0.74
None	12.9	14.6	98.1	1.07	14.4	16.6	98.1	2.05	16.5	19.4	97.9	1.06
Missing	11.4	0.0	92.5	1.20	13.2	0.0	93.4	1.37	14.9	0.0	95.1	1.38
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
PS/PG-ES	3.1	1.73	-1.3	7.5	1.5	1.87	-3.2	6.2	5.6	1.86	**0.9**	**10.3**
None-ES	-1.0	1.85	-5.7	3.7	-2.3	2.53	-8.7	4.1	1.4	2.01	-3.7	6.5
Missing-ES	-6.6	1.93	**-11.5**	**-1.7**	-7.0	2.02	**-12.1**	**-1.9**	-1.4	2.20	-6.9	4.1

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Sixth class pupils who had attended Early Start had a significantly lower mean score (96.5) than pupils who attended other pre-school programmes (102.1). However, this statistic needs to be interpreted with caution. Sixth class pupils who attended Early Start would have been enrolled in the programme in its first year, when it was available in only a small number of very disadvantaged schools. Moreover, it was not possible to verify the accuracy of parents' claims that their child had attended Early Start. Most First and Third class pupils whose parents indicated that they attended Early Start were currently either enrolled in schools with an Early Start programme, schools with

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[1] Pupils (N=113) who had attended *both* Early Start and a pre-school or playgroup are included under Early Start in Table 5.8.

an Early Start feeder school, or schools in areas with an Early Start programme (for example, a pupil enrolled in a boys-only schools, where the local girls' school had an Early Start programme). In contrast, most Sixth class pupils whose parents indicated that they had attended Early Start were not currently enrolled in schools associated with the programme. Finally, Sixth class pupils who had attended a pre-school were from families with a significantly higher score on a scale of socioeconomic status (discussed in detail in Chapter 6) than pupils who did not attend a pre-school (t=2.392, df=1479, p=.017), a difference that was reflected across all three grade levels.

Mobility/Transfer

Data from class teachers indicated that between 10% (First class) and 15% (Sixth class) of pupils had not been enrolled in their school for all grades offered at the school. There are no significant differences in achievement between those who had not been continuously enrolled in the school and those who had.

Homework

Five percent of First class pupils, and approximately 15% of Third and Sixth class pupils attended a homework club (Table 5.9). Third and Sixth class pupils who attended a club had significantly lower mean achievement scores (approximately half a standard deviation) than did their counterparts who did not attend. Amongst Third class pupils, those who did not attend homework clubs had a significantly higher mean score (102.2) than did those for whom data were missing (92.8). There were no significant differences between First class pupils on this item.

Table 5.9: Mean reading achievement and homework club attendance, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Yes	4.7	5.4	96.2	2.17	13.0	15.0	94.5	1.82	12.1	14.4	93.8	1.45
No	83.2	94.6	101.2	0.75	74.0	85.0	102.2	1.05	72.4	85.6	102.3	0.68
Missing	12.1	0.0	93.0	1.31	13.0	0.0	92.8	1.13	15.5	0.0	94.1	1.43
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
No-Yes	5.0	2.30	-0.4	10.4	7.7	2.10	**2.8**	**12.6**	8.5	1.60	**4.7**	**12.3**
Missing-Yes	-3.2	2.53	-9.1	2.7	-9.4	2.14	**-14.4**	**-4.4**	0.3	2.04	-4.5	5.1

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Ninety-eight percent of First class pupils received English homework (Table 5.10). These pupils had a significantly higher mean achievement score (100.4) than did those who did not receive English homework (90.3), and those pupils for whom data are missing (92.5). Third and Sixth class pupils were asked about the frequency with which they completed English homework. Most Third and Sixth class pupils reported that they completed English homework on a daily basis (87% and 83%, respectively), with less than 3% at each grade level indicating that they hardly ever or never did English homework (Table 5.11). Those who did English homework every day had higher mean achievement scores than did those who hardly ever did English homework (100.3 versus 90.4 in Third class, and 100.4 and 88.4 in Sixth class).

Table 5.10: Mean achievement scores and engagement in English homework, First class

	%T	%A	Mean	SE
Yes	95.2	97.6	100.4	0.75
No	2.4	2.4	90.3	2.09
Missing	2.4	0.0	92.5	2.47
Comparisons	Diff	SED	95% BCI	
No-Yes	-10.1	2.22	**-15.3**	**-4.9**
Missing-Yes	-7.9	2.58	**-13.9**	**-1.9**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 5.11: Mean achievement scores and frequency of English homework, Third and Sixth class

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Every day	84.9	87.2	100.3	1.08	81.8	82.6	100.4	0.75
1-2 week	8.3	8.6	100.2	1.68	12.6	12.7	100.0	1.42
Few times mth	1.4	1.5	99.1	2.56	1.7	1.7	100.9	3.63
Hardly ever/never	2.7	2.8	90.4	3.51	2.9	2.9	88.4	1.88
Missing	2.6	0.0	98.7	5.48	1.0	0.0	96.4	3.41
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
1-2/wk - Every day	-0.1	2.00	-3.2	3.0	-0.4	1.61	-2.9	2.1
Few mth-Every day	-1.2	2.78	-5.6	3.2	0.5	3.71	-5.3	6.3
Hardly e–Every day	-9.9	3.67	**-15.7**	**-4.1**	-12.0	2.02	**-15.2**	**-8.8**
Missing–Every day	-1.6	5.59	-10.4	7.2	-4	3.49	-9.5	1.5

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

As can be seen from Table 5.12, most Third and Sixth class pupils spent between 5 and 15 minutes per day on English homework. A small minority (6% of Third class and 4% of Sixth class pupils) spent an hour a day on English homework, and these pupils had significantly lower mean scores than those whose English homework took them 15 minutes.

Table 5.12: Mean reading achievement scores and frequency of time spent on English homework, Third and Sixth class

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
5 mins	26.8	27.4	100.5	1.15	12.6	12.7	97.6	1.49
15 mins	46.6	47.7	101.1	1.30	55.3	55.9	101.4	0.89
30 mins	18.4	18.9	98.9	1.16	27.1	27.4	99.4	0.76
1 hour	5.9	6.0	93.4	1.17	4.0	4.0	92.1	1.71
Missing	2.3	0.0	98.3	6.31	1.0	0.0	97.6	3.46
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
5 mins-15 mins	-0.6	1.74	-5.2	4.0	-3.8	1.74	-8.4	0.8
30 mins-15 mins	-2.2	1.74	-6.8	2.4	-2.0	1.17	-5.1	1.1
1hr-15 mins	-7.7	1.75	**-12.3**	**-3.1**	-9.3	1.93	**-14.4**	**-4.2**
Missing-15 mins	-2.8	6.44	-19.8	14.2	-3.8	3.57	-13.2	5.6

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Engagement in Learning and Reading

In this section, pupils' engagement in learning and reading is examined. Topics such as school attendance, behaviour and participation in class, persistence in schoolwork, attention and concentration, and ability to work independently are examined, engagement in reading as a leisure activity, and receipt of learning-support teaching.

Attendance at School

As part of the Pupil Rating Form, teachers were asked to indicate the number of days each pupil was present along with the total number of school days for the quarter ending March 31st 2003. A percentage attendance rate was then calculated for each pupil. Across all grade levels the average pupil attendance rate was 90% and the average number of school days in the quarter was of 53 (Table 5.13). Attendance was significantly correlated with reading achievement (Table 5.14). The correlation was strongest in First class (r=.21) and weakest in Sixth class (r=.15).

Table 5.13: Pupil mean attendance rates, by grade level

	N	Mean	Range	Std. Dev
1st	2162	90.9	4.0 – 100.0	8.84
3rd	2036	90.5	21.6 – 100.0	9.14
6th	2050	90.0	0.0 – 100.0	9.83

Table 5.14: Correlations between achievement scores and attendance, by grade level

	1st	3rd	6th
r	**.212**	**.159**	**.153**
t	10.495	5.549	3.859
p	0.000	0.000	0.000

For assistance in interpreting Table, see Inset 3.2 on page 34.

Pupils were split into categories of low, medium or high based on their attendance. Pupils with low attendance do not perform significantly differently than other pupils at Third class, but have significantly poorer reading scores than pupils with high attendance rates at First and Sixth class (Table 5.15). Amongst First class pupils, those with low attendance also have significantly poorer reading scores than pupils with medium attendance rates.

Table 5.15: Mean reading achievement scores and pupil attendance (split into low, medium and high attendance rates), by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Low	32.9	33.4	96.8	0.97	32.2	33.5	97.8	1.25	33.5	35.0	97.4	0.94
Medium	34.3	34.9	100.2	0.71	32.9	34.3	100.7	0.95	30.7	32.1	100.2	0.78
High	31.2	31.7	103.6	0.93	30.9	32.2	102.1	1.39	31.5	32.9	102.4	1.05
Missing	1.7	0.0	94.0	2.23	4.0	0.0	96.3	3.02	4.3	0.0	101.3	3.63
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Medium-Low	3.4	1.2	**0.4**	**6.4**	2.9	1.57	-1.1	6.9	2.8	1.22	-0.3	5.9
High-Low	6.8	1.3	**3.4**	**10.2**	4.3	1.87	-0.4	9.0	5.0	1.41	**1.5**	**8.5**
Missing-Low	-2.8	2.4	-8.9	3.3	-1.5	3.27	-9.7	6.7	3.9	3.75	-5.5	13.3

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Behaviour in School and the Classroom

At each grade level, teachers rated the behaviour in school of at least 42% of pupils as 'very good'. Across all grades, pupils whose behaviour was rated 'poor' or 'very poor' had significantly lower scores than pupils whose behaviour was rated as 'good' (Table 5.16). Similarly, at each grade level those rated as 'very good' achieve a significantly higher mean score than those who are rated 'good'. Finally, Sixth class pupils rated as 'good' achieve a significantly higher mean score than those rated 'average' (99.3 versus 93.1, respectively). Teachers were also asked to rate each of their pupils on four variables related to behaviour in class: participation in class, attention and concentration, persistence in school work, and ability to work with limited supervision.

At least 60% of First, Third and Sixth class pupils were described as having 'good' or 'very good' participation in class (Table 5.17). Teacher ratings of pupils' level of participation in class correspond closely with reading achievement (approximately one-third of a standard deviation between levels). Across all grades, pupils rated as having 'good' participation in class perform significantly better than pupils rated 'average' or 'poor', and significantly poorer than those rated as 'very good'. Those whom teachers rated as 'very poor' at participating in class have significantly lower mean achievement scores than those whose participation is rated as 'good', but only at Third and Sixth class.

Table 5.16: Mean achievement scores and teacher ratings of pupil behaviour in school, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Very good	41.4	42.0	104.8	0.78	44.0	45.0	104.3	1.13	41.8	43.9	104.6	0.74
Good	27.6	28.0	98.8	0.98	27.2	27.9	99.1	1.08	28.8	30.3	99.3	0.86
Average	20.5	20.8	95.6	0.97	17.9	18.4	95.1	1.27	16.5	17.3	93.1	1.26
Poor	6.8	6.9	93.1	1.48	6.7	6.9	92.0	2.16	6.3	6.6	92.6	1.33
Very poor	2.2	2.2	91.9	1.86	1.8	1.8	93.2	2.77	1.9	2.0	87.1	1.74
Missing	1.4	0.0	93.9	3.65	2.4	0.0	96.0	2.80	4.8	0.0	100.4	2.52
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
V. Good-Good	6.0	1.25	**2.6**	**9.4**	5.2	1.56	**0.9**	**9.5**	5.3	1.13	**2.2**	**8.4**
Average-Good	-3.2	1.38	-7.0	0.6	-4.0	1.67	-8.6	0.6	-6.2	1.53	**-10.4**	**-2.0**
Poor-Good	-5.7	1.78	**-10.5**	**-0.9**	-7.1	2.41	**-13.7**	**-0.5**	-6.7	1.58	**-11.0**	**-2.4**
V. Poor-Good	-6.9	2.10	**-12.6**	**-1.2**	-5.9	2.97	**-14.0**	**2.2**	-12.2	1.94	**-17.5**	**-6.9**
Missing-Good	-4.9	3.78	-15.2	5.4	-3.1	3.00	-11.3	5.1	1.1	2.66	-6.2	8.4

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 5.17: Mean reading achievement scores and teacher rating of pupil participation in class, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Very good	29.1	29.5	109.2	0.92	31.5	32.3	108.8	0.99	27.9	29.3	107.8	0.83
Good	30.6	31.0	100.6	0.97	28.2	28.9	100.0	1.14	29.4	30.9	102.0	0.89
Average	25.0	25.4	95.0	0.98	23.9	24.5	95.0	1.11	23.1	24.3	94.7	1.06
Poor	10.8	11.0	90.5	0.90	10.9	11.2	90.2	1.33	11.3	11.9	89.6	1.07
Very poor	3.1	3.1	85.0	1.28	3.1	3.2	84.7	1.78	3.3	3.5	85.3	1.59
Missing	1.4	0.0	93.2	3.53	2.4	0.0	97.4	2.80	5.1	0.0	102.2	2.71
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
V. good-Good	8.6	1.34	**5.0**	**12.2**	8.8	1.51	**4.7**	**12.9**	5.8	1.22	**2.5**	**9.1**
Average-Good	-5.6	1.38	**-9.4**	**-1.8**	-5.0	1.59	**-9.3**	**-0.7**	-7.3	1.38	**-11.1**	**-3.5**
Poor-Good	-10.1	1.32	**-13.7**	**-6.5**	-9.8	1.75	**-14.6**	**-5.0**	-12.4	1.39	**-16.2**	**-8.6**
V. poor-Good	-15.6	1.61	-20.0	11.2	-15.3	2.11	**-21.1**	**-9.5**	-16.7	1.82	**-21.7**	**-11.7**
Missing-Good	-7.4	3.66	-17.4	2.6	-2.6	3.02	-10.9	5.7	0.2	2.85	-7.6	8.0

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Approximately 80% of First, Third and Sixth class pupils were rated as having average or above average persistence in schoolwork (Table 5.18), with ratings closely matched to reading achievement outcomes. Those rated as 'good' achieved significantly higher mean scores than those rated as 'average', 'poor' or 'very poor', and significantly lower mean scores than those rated as 'very good'. Just under a quarter of pupils at each grade level were rated as having 'poor' or 'very poor' attention and concentration in class. Those rated as 'good' achieved significantly higher mean scores than those rated as 'average', 'poor' or 'very poor', and significantly lower mean scores than those rated as 'very good' (Table 5.19). First class pupils for whom there are no data on attention and concentration achieve a significantly poorer mean reading score than pupils with good concentration.

Table 5.18: Mean reading achievement scores and teacher rating of pupils' persistence in schoolwork, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Very good	27.1	27.6	111.1	0.93	28.3	29.1	109.2	0.91	26.0	27.5	109.6	0.88
Good	27.8	28.2	101.2	1.27	25.1	25.9	101.9	1.21	27.4	28.9	100.7	0.89
Average	24.4	24.8	95.2	0.85	24.6	25.3	95.4	1.35	21.9	23.1	96.3	0.96
Poor	14.3	14.5	90.6	0.87	14.4	14.8	91.6	1.44	14.5	15.3	90.6	0.81
Very poor	4.8	4.9	85.5	1.15	4.8	4.9	86.4	1.39	4.9	5.1	86.2	1.61
Missing	1.6	0.0	92.5	3.22	2.8	0.0	97.1	2.44	5.3	0.0	102.0	2.62
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
V. Good-Good	9.9	1.6	**5.6**	**14.2**	7.3	1.5	**3.2**	**11.4**	8.9	1.25	**5.5**	**12.3**
Average-Good	-6.0	1.5	**-10.2**	**-1.8**	-6.5	1.8	**-11.5**	**-1.6**	-4.4	1.31	**-8.0**	**-0.8**
Poor-Good	-10.6	1.5	**-14.8**	**-6.4**	-10.3	1.9	**-15.4**	**-5.2**	-10.1	1.20	**-13.4**	**-6.8**
V. Poor-Good	-15.7	1.7	**-20.4**	**-11.0**	-15.5	1.8	**-20.5**	**-10.5**	-14.5	1.84	**-19.5**	**-9.5**
Missing-Good	-8.7	3.5	-18.1	0.7	-4.8	2.7	-12.2	2.6	1.3	2.77	-6.3	8.9

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 5.19: Mean reading achievement scores and teacher rating of pupils' attention/concentration, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Very good	21.4	21.7	112.0	0.95	24.7	25.4	110.8	1.01	24.7	26.0	109.8	0.92
Good	28.8	29.2	102.9	1.24	23.5	24.2	103.2	1.14	27.4	28.9	101.8	0.93
Average	23.8	24.2	96.0	0.77	25.6	26.3	96.2	1.25	22.4	23.5	96.8	0.80
Poor	17.3	17.6	91.7	0.83	17.3	17.7	90.5	1.21	14.9	15.7	90.0	0.77
Very poor	7.2	7.3	87.6	1.12	6.2	6.4	88.6	1.37	5.6	5.9	84.9	1.50
Missing	1.5	0.0	92.5	3.45	2.8	0.0	97.0	2.37	4.9	0.0	102.6	2.60
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
V. Good-Good	9.1	1.56	**4.8**	**13.4**	7.6	1.52	**3.5**	**11.8**	8.0	1.31	**4.4**	**11.6**
Average-Good	-6.9	1.46	**-10.9**	**-2.9**	-7.0	1.69	**-11.6**	**-2.4**	-5.0	1.23	**-8.4**	**-1.7**
Poor-Good	-11.2	1.49	**-15.3**	**-7.1**	-12.7	1.66	**-17.2**	**-8.2**	-11.8	1.21	**-15.1**	**-8.5**
V. Poor-Good	-15.3	1.67	**-19.9**	**-10.8**	-14.6	1.78	**-19.5**	**-9.7**	-16.9	1.76	**-21.7**	**-12.1**
Missing-Good	-10.4	3.67	**-20.4**	**-0.4**	-6.2	2.63	-13.4	1.0	0.8	2.76	-6.7	8.3

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Teachers rated over three-quarters of First, Third and Sixth class pupils as having average or above average ability to work with limited supervision (Table 5.20). At each of the three grade levels, those that teachers rated as 'good' achieve significantly higher mean scores than those rated as 'poor' or 'very poor', and significantly lower mean scores than those rated as 'very good'. First and Third class pupils whose teachers rated their ability to work with limited supervision as 'good' also achieved significantly higher mean scores than did those rated as 'average'.

Table 5.20: Mean reading achievement scores and teacher rating of pupils' ability to work independently, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Very good	24.9	25.3	111.5	0.87	26.9	27.6	110.1	1.02	26.1	27.6	109.3	0.88
Good	24.5	24.9	102.2	1.42	23.9	24.6	102.5	1.30	26.0	27.5	100.6	0.98
Average	25.9	26.3	96.1	0.87	23.3	23.9	96.4	1.27	22.4	23.7	97.6	1.06
Poor	14.8	15.0	92.4	0.78	15.8	16.2	90.6	1.18	14.3	15.1	90.6	0.93
Very poor	8.4	8.5	85.9	0.88	7.5	7.7	87.4	1.55	5.7	6.1	86.1	1.32
Missing	1.5	0.0	93.7	3.59	2.6	0.0	98.6	2.68	5.4	0.0	102.0	3.03
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
V. Good-Good	9.3	1.67	**4.8**	**13.8**	7.6	1.7	**3.1**	**12.1**	8.7	1.32	**5.1**	**12.3**
Average-Good	-6.1	1.67	**-10.6**	**-1.6**	-6.1	1.8	**-11.1**	**-1.1**	-3.0	1.44	-6.9	0.9
Poor-Good	-9.8	1.62	**-14.2**	**-5.4**	-11.9	1.8	**-16.7**	**-7.1**	-10.0	1.35	**-13.7**	**-6.3**
V. Poor-Good	-16.3	1.67	**-20.9**	**-11.8**	-15.1	2.0	**-20.6**	**-9.6**	-14.5	1.64	**-19.0**	**-10.0**
Missing-Good	-8.5	3.86	-19.0	2.0	-3.9	3.0	-12.0	4.2	1.4	3.18	-7.3	10.1

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Leisure Reading

Most Third class pupils (64%) borrowed books from the school or public library either on a daily or weekly basis, compared to only 36% of those in Sixth class (Table 5.21). At both grade levels, those who borrowed books every day perform significantly poorer than those who borrowed books a few times a month.

Table 5.21: Mean reading achievement scores and frequency of borrowing books from a school or public library, Third and Sixth class

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Every day	15.8	16.3	98.3	1.48	4.4	4.5	97.6	2.04
1-2 week	46.9	48.3	100.4	1.18	31.4	31.8	99.7	0.81
Few times mth	15.2	15.7	103.0	1.48	36.5	36.9	101.6	0.98
Hardly ever/never	19.1	19.7	98.3	1.35	26.5	26.8	98.7	1.08
Missing	2.9	0.0	98.6	4.97	1.1	0.0	96.2	2.92
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
1-2/wk-Every day	2.1	1.89	-0.9	5.1	2.1	2.19	-1.4	5.6
Few mth-Every day	4.7	2.09	**1.4**	**8.0**	4.0	2.26	**0.4**	**7.6**
Hardly e–Every day	0.0	2.00	-3.1	3.2	1.1	2.31	-2.5	4.7
Missing–Every day	0.33	5.19	-7.8	8.5	-1.4	3.56	-7.0	4.2

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Eighty-one percent of First class pupils indicated that they read books for fun, and these pupils have a significantly higher achievement score (100.3 [SE=0.84]) than those who did not respond to the question (91.0 [SE=2.69]). Third and Sixth class pupils were asked about the frequency with which they read books for fun at home. Forty-three percent of Third class pupils did so every day, as did 27% of Sixth class pupils (Table 5.22). At both grades, pupils who read books for fun on a daily basis have significantly higher mean scores than those who read for fun either a few times a month, or hardly ever or never. Also, Sixth class pupils who read books every day (106.5) perform significantly better than those who read for fun once or twice a week (98.9).

Table 5.22: Mean reading achievement scores and frequency of reading books for fun at home, Third and Sixth class

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Every day	42.1	43.0	102.5	1.21	26.8	27.0	106.5	1.07
1-2 week	26.9	27.5	100.2	1.13	29.1	29.4	98.9	0.90
Few times mth	12.5	12.8	99.1	1.50	20.3	20.5	99.1	0.91
Hardly ever/never	16.3	16.6	94.1	1.20	22.9	23.1	94.8	1.04
Missing	2.2	0.0	99.9	6.13	0.9	0.0	96.8	3.51
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
1-2/wk –Every day	-2.3	1.66	-4.9	0.3	-7.6	1.40	**-9.8**	**-5.4**
Few mth-Every day	-3.3	1.93	**-6.4**	**-0.3**	-7.4	1.40	**-9.6**	**-5.2**
Hardly e–Every day	-8.4	1.70	**-11.0**	**-5.7**	-11.7	1.49	**-14.0**	**-9.4**
Missing- Every day	-2.56	6.25	-12.4	7.3	-9.7	3.67	**-15.47**	**-3.9**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Almost three-quarters (73.4%) of those in First class read magazines or comics for fun, but these pupils did not have a significantly different achievement score than those who did (100.2 versus 100.0, respectively). The proportions of Third and Sixth class pupils who read magazines or comics for fun was also high, with only 18% of Third and 12% of Sixth class pupils indicating that they hardly ever or never did so (Table 5.23). For Third class pupils, achievement scores were unrelated to the frequency with which comics or magazines were read. However, the 32% of Sixth class pupils who read a comic or magazine on a daily basis have a significantly higher mean achievement score (102.2) than those who did so a few times a month (98.0), or hardly ever or never (95.0).

Table 5.23: Mean reading achievement scores and frequency of reading part of a magazine or comic, Third and Sixth class

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Every day	33.7	34.3	99.6	1.23	32.0	32.3	102.2	0.95
1-2 week	32.3	32.9	102.0	1.16	39.2	39.6	101.3	0.82
Few times mth	14.9	15.1	104.8	1.80	16.0	16.2	98.0	1.11
Hardly ever/never	17.3	17.6	97.3	1.03	11.9	12.0	95.0	1.15
Missing	1.9	0.0	101.8	6.69	0.9	0.0	96.9	3.51
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
1-2/wk -Every day	2.4	1.69	-0.3	5.1	-0.9	1.25	-2.9	1.1
Few mth-Every day	5.2	2.18	1.8	8.6	-4.2	1.46	**-6.5**	**-1.9**
Hardly e-Every day	-2.3	1.60	-4.8	0.2	-7.2	1.49	**-9.5**	**-4.9**
Missing–Every day	2.2	6.80	-8.5	12.9	-5.3	3.64	-11.0	0.42

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Reading newspapers was much more frequent amongst Sixth class than amongst Third class pupils (Table 5.24). Whereas 32% of Sixth class pupils read newspapers on a daily basis, only 19% of Third class did so. Moreover, 42% of Third class pupils hardly ever or never read newspapers, compared to 18% of those in Sixth class. At both grade levels, those who read newspapers on a daily basis have a significantly higher achievement score than those who hardly ever read newspapers, while, amongst those in Sixth class, daily readers have a poorer mean score than those who read newspapers once or twice a week.

Table 5.24: Mean reading achievement scores and frequency of reading part of a newspaper, Third and Sixth class

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Every day	18.7	19.1	100.1	1.06	31.7	32.0	99.3	0.86
1-2 week	25.0	25.5	101.2	1.25	35.8	36.1	101.5	0.81
Few times mth	13.5	13.8	102.0	1.31	14.2	14.3	101.4	1.39
Hardly ever/never	40.9	41.7	95.9	1.33	17.5	17.6	95.2	1.34
Missing	1.9	0.0	100.6	8.42	0.8	0.0	97.7	3.92
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
1-2/wk -Every day	1.1	1.64	-1.5	3.7	2.2	1.18	**0.3**	**4.1**
Few mth-Every day	1.9	1.69	-0.8	4.6	2.1	1.63	-0.5	4.7
Hardly e–Every day	-4.2	1.70	**-6.9**	**-1.5**	-4.1	1.59	**-6.6**	**-1.6**
Missing–Every day	0.5	8.5	-12.8	13.8	-1.6	4.01	-7.9	4.7

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Receipt of Supplementary Support

Teachers were asked to supply information on each pupil, including whether the pupil had been assessed for a general or specific learning disability, and whether s/he was in need of, and/or in receipt of learning-support and resource teaching. They were also asked to indicate the duration of any learning-support provided, and to estimate, if applicable, for how long pupils would continue to need learning-support.

Between 8% (First class) and 14% (Third and Sixth class) of pupils had been diagnosed with a learning disability (Table 5.25), and most of these pupils were in receipt of resource teaching. However, 1% of First and Third class pupils, and 4% of Sixth class pupils have been diagnosed with a learning disability in English, but are not receiving assistance from a resource teacher. At each grade level, those in receipt of resource teaching achieved a mean score at least three-quarters of a standard deviation lower than pupils who have not been diagnosed with a learning disability. Also, First and Third class pupils diagnosed with a learning disability, but not in receipt of resource teaching perform significantly poorer (88.5 and 93.2, respectively), than pupils not diagnosed. First and Third class pupils for whom there are no data perform significantly poorer (94.0) than pupils who have not been diagnosed as having a learning disability.

Table 5.25: Mean reading achievement scores, by diagnosis of a learning disability and receipt of resource teaching, by grade level

	1st				3rd				6th			
	T	A	Mean	SE	T	A	Mean	SE	T	A	Mean	SE
Not diagnosed	89.5	91.6	101.3	0.80	82.4	86.4	102.6	1.01	79.6	86.5	102.0	0.83
Yes, & gets RT	7.0	7.1	88.2	1.02	11.6	12.2	85.0	1.17	9.1	9.9	85.4	1.06
Yes, but no RT	1.3	1.3	88.5	2.12	1.3	1.4	93.2	2.38	3.3	3.6	96.7	3.84
Missing	2.2	0.0	94.0	2.08	4.6	0.0	94.0	1.87	7.9	0.0	98.2	2.51
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Yes, & RT-Not	-13.1	1.30	**-16.4**	**-9.8**	-17.6	1.55	**-21.5**	**-13.7**	-16.6	1.35	**-20.0**	**-13.2**
Yes, no RT-Not	-12.8	2.27	**-18.5**	**-7.1**	-9.4	2.59	**-15.9**	**-2.9**	-5.3	3.93	-15.2	4.6
Missing-Not	-7.3	2.23	**-12.9**	**-1.7**	-8.6	2.13	**-14.0**	**-3.2**	-3.8	2.64	-10.5	2.9

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Based on teacher perceptions, between 25% (Sixth class) and 31% (First class) of pupils were in need of learning-support at the time of the survey (Table 5.26). Most of these were receiving learning-support, but between 5% to 8% of *all* pupils at a grade level were in need of, but

not receiving learning-support. Across all grades, those perceived not to need learning-support have a significantly higher mean score than those in receipt learning-support, and those in need, but not in receipt of, learning-support. At Third and Sixth class, some of these differences exceeded one full standard deviation. Also, First and Third class pupils for whom there are no data have significantly poorer mean scores than pupils reported as not in need of learning-support.

Table 5.26: Mean reading achievement scores and need of learning-support for English reading, by grade level

	1st				3rd				6th			
	T	A	Mean	SE	T	A	Mean	SE	T	A	Mean	SE
Not in need	68.4	69.5	101.3	0.80	69.8	72.3	105.2	0.96	70.1	75.1	104.4	0.71
Yes, & gets LS	25.2	25.6	88.2	1.02	21.6	22.3	86.5	0.86	15.7	16.8	86.2	0.78
Yes, but no LS	4.8	4.9	88.5	2.12	5.2	5.4	91.6	1.54	7.6	8.1	88.6	1.50
Missing	1.7	0.0	94.0	2.08	3.4	0.0	91.1	2.53	6.7	0.0	99.0	2.91
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Gets LS-No need	-13.1	1.30	**-16.4**	**-9.9**	-18.7	1.29	**-21.9**	**-15.5**	-18.2	1.05	**-20.9**	**-15.5**
No LS-No need	-12.8	2.27	**-18.5**	**-7.1**	-13.6	1.81	**-18.2**	**-9.0**	-15.8	1.66	**-20.0**	**-11.6**
Missing-No need	-7.3	2.23	**-12.9**	**-1.7**	-14.1	2.71	**-20.9**	**-7.3**	-5.4	3.00	-12.9	2.1

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Teachers were also asked to indicate, to the nearest school year, the duration of learning-support in English reading received by each pupil. First class pupils who had received learning-support averaged 1.6 years (SE=0.06) (range: 1 to 3 years), compared to an average of 2.5 years (SE=0.12) (range: 1 to 5 years) in Third class and 4 years (SE=0.19) (range: 1 to 9 years) in Sixth class. Next, teachers were asked for how much longer they felt that each pupil would need learning-support for English reading (Table 5.27).

Table 5.27: Mean reading achievement scores and length of time pupil will need learning-support for English reading, by grade level

	1st				3rd				6th			
	T	A	Mean	SE	T	A	Mean	SE	T	A	Mean	SE
Doesn't need	57.3	65.5	105.4	0.87	55.2	66.8	106.0	1.07	57.8	71.8	105.2	0.83
Few months	3.0	3.5	93.0	1.10	1.7	2.0	95.2	2.38	2.4	3.0	92.2	1.54
1 year	5.8	6.7	92.2	0.84	3.5	4.2	93.4	1.33	3.3	4.1	88.6	1.38
2 years	4.9	5.6	90.6	1.11	4.7	5.7	85.8	1.27	4.3	5.4	86.2	1.44
>2 years	16.3	18.7	86.9	0.64	17.5	21.2	85.4	0.91	12.6	15.7	85.3	0.98
Missing	12.6	0.0	101.4	1.56	17.4	0.0	101.4	1.60	19.5	0.0	100.2	1.18
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Few mths-No	-12.4	1.40	**-16.2**	**-8.6**	-10.8	2.61	**-17.9**	**-3.7**	-13.0	1.75	**-17.8**	**-8.2**
1 yr-No	-13.2	1.21	**-16.5**	**-9.9**	-12.6	1.71	**-17.3**	**-7.9**	-16.6	1.61	**-21.0**	**-12.2**
2 yrs-No	-14.8	1.41	**-18.6**	**-11.0**	-20.2	1.66	**-24.7**	**-15.7**	-19.0	1.66	**-23.5**	**-14.5**
>2 yrs-No	-18.5	1.08	**-21.4**	**-15.6**	-20.6	1.40	**-24.4**	**-16.8**	-19.9	1.28	**-23.4**	**-16.4**
Missing-No	-4.0	1.79	-8.9	0.87	-4.6	1.92	-9.9	0.7	-5.0	1.44	**-8.9**	**-1.1**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Excluding those not perceived to need learning-support, the most frequent response was that a pupil would need support for more than two years. Between 16% and 21% of pupils, depending on grade level, were perceived to be in need of long-term learning-support (Table 5.27). Across all grades, pupils perceived to need learning-support achieve a significantly lower reading achievement score than pupils perceived not to need learning-support, with achievement scores decreasing as time for which learning-support is required increases. The largest difference in

achievement (over one and a third standard deviation) is between pupils not in need of learning-support and pupils who will need learning-support for in excess of two years.

Attitudes, Aspirations and Expectations

As part of the Pupil Attitude Questionnaire, all pupils were asked about their attitudes towards school and reading. In addition, Third and Sixth class pupils were asked about their expectations and aspirations for school attainment.

Attitude to School

All pupils were asked to indicate their level of agreement with a series of statements relating to school and reading. Most First class pupils (71%) agreed that they liked school, while 17% disagreed (Table 5.28). Those who agreed that they like school have a significantly higher mean achievement score (99.6) than do those for whom data are missing (89.2).

Table 5.28: Mean reading achievement scores and pupils' agreement with the statement 'I like school', First class

	%T	%A	Mean	SE
Agree	70.3	71.4	99.6	0.79
Not sure	11.4	11.6	102.5	1.52
Disagree	16.8	17.0	101.0	1.05
Missing	1.5	0.0	89.18	2.33
Comparisons	Diff	SED	95% BCI	
Not sure-Agree	2.9	1.71	-1.4	7.2
Disagree-Agree	1.4	1.31	-1.9	4.7
Missing- Agree	-10.4	2.46	**-16.6**	**-4.2**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Thirty-two percent of Third class pupils, but only 9% of those in Sixth class agreed a lot that they liked school (Table 5.29). If, however, those who agreed or agreed a lot with the statement are considered, differences between the grade levels diminish (55% of Third class and 44% of Sixth class agreed to some extent with the statement). At both grade levels, those who agreed that they liked school have significantly higher mean achievement scores than those who disagreed a lot. Third class pupils who agreed a lot with the statement perform significantly poorer (96.9) than those who merely agreed (104.0).

Table 5.29: Mean reading achievement scores and pupils' agreement with the statement 'I like school', Third and Sixth class

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Agree a lot	31.2	32.2	96.9	1.35	8.8	8.9	98.4	1.49
Agree	22.4	23.1	104.0	1.13	34.4	34.8	101.8	0.85
Not Sure	18.2	18.8	102.0	1.34	22.7	22.9	100.6	1.02
Disagree	7.8	8.0	100.1	1.44	17.2	17.4	100.1	1.21
Disagree a lot	17.3	17.9	98.6	1.31	15.7	15.9	96.3	0.97
Missing	3.1	0.0	98.6	4.64	1.1	0.0	94.6	3.29
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
Agree a lot-Agree	-7.1	1.76	**-11.9**	**-2.3**	-3.4	1.72	-8.1	1.3
Not sure-Agree	-2.0	1.75	-6.8	2.8	-1.2	1.33	-4.8	2.4
Disagree-Agree	-3.9	1.83	-8.9	1.1	-1.7	1.48	-5.7	2.3
Disag a lot-Agree	-5.4	1.73	**-10.1**	**-0.7**	-5.5	1.29	**-9.0**	**-2.0**
Missing-Agree	-5.4	4.78	-18.4	7.6	-7.2	3.40	-16.5	2.1

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Attitude to Reading

In this section, pupils' attitudes to reading are described. Data contained here draw not only from the responses of pupils, but also from those of their parents.

Self-Description of Attitude to Reading

Seventy-five percent of First class pupils agreed with the statement 'I like reading', while 11% disagreed (Table 5.30). Responses were similar amongst Third and Sixth class pupils, with 75% and 70%, respectively, agreeing or agreeing a lot that they liked reading (Table 5.31). Amongst First class pupils, those who agreed achieve a significantly higher mean score (100.9) than those who disagreed (96.7), and those for whom data are missing (89.2). At Third and Sixth class, those who agreed that they liked reading perform significantly better than those who disagreed and those who disagreed a lot. Third class pupils agreeing with the statement also achieve a significantly higher mean score (101.7) than those who were not sure that they like reading (96.0). Sixth class pupils who agreed a lot with the statement (105.8) perform significantly better than those who simply agreed (99.5).

Table 5.30: Mean reading achievement scores and pupils' agreement with the statement 'I like reading', First class

	%T	%A	Mean	SE	
Agree	74.1	75.3	100.9	0.90	
Not sure	13.3	13.6	99.1	1.07	
Disagree	11.0	11.2	96.7	0.95	
Missing	1.5	0.0	89.2	3.47	
Comparisons	Diff	SED	95% BCI		
Not sure-agree	-1.8	1.40	-5.3	1.7	
Disagree-agree	-4.2	1.31	**-7.5**	**-0.9**	
Missing- agree	-11.7	3.58	**-20.7**	**-2.7**	

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 5.31: Mean reading achievement scores and pupils' agreement with the statement 'I like reading', Third and Sixth class

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Agree a lot	51.8	53.8	101.9	1.30	29.4	29.8	105.8	1.07
Agree	20.4	21.2	101.7	0.93	39.5	40.0	99.5	0.68
Not Sure	8.9	9.3	96.0	1.66	13.5	13.7	96.3	1.12
Disagree	5.4	5.7	95.3	1.58	9.6	9.7	94.6	1.08
Disagree a lot	9.6	10.0	94.1	1.06	6.7	6.8	94.1	0.96
Missing	3.8	0.0	96.3	4.44	1.3	0.0	94.6	2.27
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
Agree a lot-Agree	0.2	1.60	-4.2	4.6	6.3	1.27	**2.8**	**9.8**
Not sure-Agree	-5.7	1.90	**-10.9**	**-0.5**	-3.2	1.31	-6.8	0.4
Disagree-Agree	-6.4	1.83	**-11.4**	**-1.4**	-4.9	1.28	**-8.4**	**-1.4**
Disag a lot-Agree	-7.6	1.41	**-11.4**	**-3.8**	-5.4	1.18	**-8.6**	**-2.2**
Missing-Agree	-5.4	4.5	-17.8	7.0	-4.9	2.37	-11.4	1.6

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Parental Perceptions of Attitude to Reading

Parents were asked to indicate on a 5-point scale (ranging from 'Very much' to 'Not at all') the extent to which they believed their child enjoyed reading. As can be seen from Table 5.32, very few parents believed that their child did not enjoy reading at all. Indeed, at least half of those at each of the three grade levels felt that their child very much enjoyed reading. Thus, parental perceptions of children's attitudes to reading are slightly more positive than pupils' actual attitudes. That aside, achievement scores are significantly related to parental perceptions of attitudes.

At each of the three grade levels, pupils described by their parents as 'somewhat' enjoying reading obtain a higher mean achievement score than those described as enjoying reading either 'not a lot' or 'not at all'. Those described as very much enjoying reading have the highest mean score at each grade level, significantly better than those who somewhat enjoy reading.

Table 5.32: Mean reading achievement scores and parents' perception of the extent to which their child enjoys reading, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Very much	59.3	67.3	104.6	0.92	50.8	57.6	105.2	1.14	42.2	49.7	105.3	0.82
Somewhat	23.6	26.8	94.7	0.73	28.5	32.3	97.1	1.04	30.1	35.5	98.1	0.76
Not a lot	4.5	5.1	90.3	1.06	7.9	8.9	89.5	1.46	10.7	12.6	93.8	1.01
Not at all	0.7	0.8	85.7	2.56	1.0	1.1	87.2	2.79	2.0	2.3	89.9	2.54
Missing	12.0	0.0	92.2	1.20	11.9	0.0	92.8	1.29	15.1	0.0	94.8	1.44
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
V. much-SW	9.9	1.17	**6.8**	**13.0**	8.1	1.54	**4.0**	**12.2**	7.2	1.12	**4.3**	**10.1**
Not a lot-SW	-4.4	1.29	**-7.8**	**-1.0**	-7.6	1.79	**-12.3**	**-2.9**	-4.3	1.26	**-7.6**	**-1.0**
Not / all- SW	-9.0	2.66	**-16.0**	**-2.0**	-9.9	2.98	**-17.8**	**-2.0**	-8.2	2.65	**-15.2**	**-1.2**
Missing- SW	-2.5	1.40	-6.2	1.2	-4.3	1.66	-8.7	0.1	-3.3	1.63	-7.6	1.0

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Aspirations for Reading

A large majority of First class pupils (84%) agreed that they really wanted to do well at reading, and these pupils achieve a significantly higher mean score than those who disagreed or for whom data were missing (Table 5.33). Similarly, most pupils in Third and Sixth class agree to a greater or lesser extent that they really wanted to do well at reading (85% and 87%, respectively) (Table 5.34). At both grade levels, those who agreed with the statement have a significantly higher achievement score than those who disagreed a lot.

Table 5.33: First class pupils' agreement with the statement 'I really want to do well at reading' and mean reading achievement scores

	%T	%A	Mean	SE
Agree	82.0	83.6	100.6	0.80
Not sure	10.0	10.2	100.0	1.02
Disagree	6.1	6.2	96.2	1.21
Missing	1.9	0.0	86.8	2.55
Comparisons	Diff	SED	95% BCI	
Not sure-agree	-0.6	1.30	-3.9	2.7
Disagree-agree	-4.4	1.45	**-8.0**	**-0.8**
Missing- agree	-13.8	2.67	**-20.5**	**-7.1**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 5.34: Pupils' agreement with the statement 'I really want to do well at reading' and mean reading achievement scores, Third and Sixth class

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Agree a lot	68.1	69.6	100.9	1.09	54.0	54.5	100.3	0.85
Agree	14.9	15.2	99.8	1.17	32.6	32.9	99.7	0.82
Not Sure	7.6	7.7	98.3	1.74	9.3	9.3	101.3	1.26
Disagree	2.1	2.2	97.4	2.80	2.3	2.3	95.9	2.77
Disagree a lot	5.2	5.3	93.5	1.98	1.0	1.0	93.0	1.98
Missing	2.0	0.0	98.2	8.35	0.9	0.0	97.1	4.01
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
Agree a lot-Agree	1.1	1.60	-3.3	5.5	0.6	1.18	-2.6	3.8
Not sure-Agree	-1.5	2.10	-7.2	4.2	1.6	1.50	-2.5	5.7
Disagree-Agree	-2.4	3.04	-10.7	5.9	-3.8	2.89	-11.7	4.1
Disag a lot-Agree	-6.3	2.30	**-12.6**	**-0.02**	-6.7	2.14	**-12.5**	**-0.9**
Missing-Agree	-1.6	8.43	-24.6	21.4	-2.6	4.09	-13.8	8.6

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Aspirations for School Attainment

In response to a question asking how far they would like to go in school, a majority of Third and Sixth class pupils (60% and 64%, respectively) indicated that they would like to go to college (Table 5.35). Less than 1% of those in Sixth class wanted only to finish primary school, as did 5% of those in Third class. For both Third and Sixth class, those who wanted to leave after Leaving Certificate obtained significantly lower mean achievement scores than those who wanted to attend college. Sixth class pupils who wanted to finish after primary school had a mean score (87.2) of almost one standard deviation below the mean, and this was significantly lower than that of those wishing to do the Leaving Certificate.

Table 5.35: Pupils' aspirations for educational attainment, and mean reading achievement scores, Third and Sixth class

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Finish primary	4.7	4.8	96.4	2.26	0.9	0.9	87.2	2.59
Do the Junior	3.6	3.8	92.0	2.33	3.8	3.8	89.0	2.04
Do the Leaving	12.5	13.0	98.0	1.39	21.4	21.6	95.0	0.98
College	57.5	59.8	102.7	0.97	63.7	64.2	103.5	0.67
Don't know	17.9	18.6	95.8	1.45	9.4	9.5	93.5	1.46
Missing	3.7	0.0	98.2	3.77	0.9	0.0	94.9	4.41
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
Finish primary-Do LC	-1.5	2.65	-8.8	5.7	-7.8	2.77	**-15.3**	**-0.2**
Do JC-Do LC	-6.0	2.71	-13.4	1.4	-6.0	2.26	-12.2	0.1
College-Do LC	4.7	1.70	**0.1**	**9.4**	8.5	1.19	**5.3**	**11.7**
Don't know-Do LC	-2.2	2.01	-7.7	3.3	-1.5	1.76	-6.3	3.3
Missing-Do LC	0.2	4.02	-10.7	11.2	-0.1	4.52	-12.4	12.2

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Expectations for School Attainment

As well as how far they would *like* to go in school, Third and Sixth class pupils were asked how far they *thought they would go* in school. There are moderate to strong correlations between responses to the two questions (Third class [r=.512; t=10.103; p<.000], Sixth class [r=.462; t=15.184; p<.000]). Generally, expectations tended to be slightly lower than aspirations. For example, whereas 64% of Sixth class pupils wanted to go to college, only 48% expected to do so. That aside, approximately half of those at each grade level expected to attend college (Table 5.36). At both grade levels, those expecting to complete Leaving Certificate had significantly higher mean achievement scores than did those expecting to leave school after Junior Certificate, or after primary school. Furthermore, Sixth class pupils who expected to attend college perform significantly better than those who expected to leave after the Leaving Certificate (104.9 versus 96.2).

Table 5.36: Pupils' expectations for educational attainment, and mean reading achievement scores, Third and Sixth class

	3rd				6th			
	T	A	Mean	SE	T	A	Mean	SE
Finish primary	3.7	3.9	93.4	2.10	0.8	0.8	85.7	3.13
Do the Junior	4.5	4.8	92.2	1.81	5.1	5.2	90.6	1.52
Do the Leaving	15.0	16.0	100.2	1.23	28.0	28.4	96.2	0.87
College	48.2	51.4	102.4	1.07	47.9	48.5	105.0	0.85
Don't know	22.4	23.9	97.5	1.41	16.9	17.1	96.6	1.05
Missing	6.2	0.0	99.3	2.27	1.2	0.0	90.6	3.74
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
Finish primary-Do LC	-6.8	2.43	**-13.4**	**-0.2**	-10.5	3.24	**-19.4**	**-1.7**
Do JC-Do LC	-8.0	2.19	**-14.0**	**-2.0**	-5.7	1.75	**-10.4**	**-0.9**
College-Do LC	2.2	1.63	-2.3	6.7	8.7	1.22	**5.4**	**12.0**
Don't know-Do LC	-2.7	1.87	-7.8	2.4	0.4	1.37	-3.4	4.1
Missing-Do LC	-0.9	2.58	-7.9	6.1	-5.6	3.84	-16.1	4.8

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

6. Home Environment

In this chapter, reading achievement is related to some characteristics of pupils' home environments. This chapter is divided into three main sections. The first section describes pupils' families, including size and structure. The second section addresses socioeconomic status, including parental employment and educational attainment. The third section explores the family as a learning environment and describes the involvement of pupils and their parents in reading activities at home, and teacher ratings of parental involvement in reading. It also describes educational resources in the home, use of public libraries, parents' reading practices, and parental expectations for their child's educational attainment.

The data presented here were gathered from multiple sources, including parents, teachers and pupils. Most, however, derive from responses of pupils' parents or guardians to the Parent Questionnaire. Across each of the grade levels, mothers comprised the greatest proportion of respondents who completed the Parent Questionnaire, ranging from 86% in Sixth class to 90% in First class. The proportion of questionnaires completed by fathers ranged from 8% in First class to 11% in Sixth. At each grade level, the relationship of the person completing the Parent Questionnaire to the pupil was either unclear or missing in 4% of cases, while approximately 2% of questionnaires at each grade level were completed by male or female guardians.

Household Composition

Parents were asked a number of questions about household composition, including the number of siblings their child had, and whether or not the child lived with one or both parents, or with guardians.

Family Structure

At each of the three grade levels, just under two-thirds of pupils lived with both their mother and father (ranging from 63% of First class to 66% of Sixth class pupils) (Table 6.1). The next most common living arrangement was a lone parent household with a female head (ranging from 31% of First class to 25% of Sixth class pupils). Less than 2% at any grade level lived with their father only, while 2% to 3% lived with their mother and a male guardian. Less than 1% lived with their father and a female guardian, while just under 3% had 'other' living arrangements. This included living with a lone male or female guardian, with both a male and female guardian, or with both parents and a male or female guardian, or both parents and a male and female guardian.

Table 6.1: Household composition, by grade level

	1st		3rd		6th	
	%T	%A	%T	%A	%T	%A
Mother & Father	56.7	63.3	56.2	63.5	56.8	66.1
Mother & Male guardian	1.7	2.0	2.7	3.0	2.9	3.3
Father & Female guardian	0.4	0.4	0.4	0.5	0.3	0.3
Lone Mother	27.6	30.7	25.9	29.3	21.9	25.5
Lone Father	0.7	0.8	1.3	1.4	1.6	1.8
Other	2.5	2.8	2.0	2.2	2.6	2.9
Missing	10.4	0.0	11.4	0.0	14.1	0.0

Table 6.2 compares the mean achievement scores of those living in a lone parent household (mother only or father only) with those living in other types of household. At each grade level, pupils living in a lone parent household have a significantly lower mean score (up to one-third of a standard deviation) than those not living in such a household. At First and Third class, those whose household composition is unknown have a lower mean score than those not living in a lone parent household.

Table 6.2: Lone parent status and mean reading achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Lone parent	28.9	32.3	98.3	1.15	26.8	30.3	98.0	1.38	24.4	28.4	97.4	0.86
Not Lone p	60.7	67.7	102.2	0.75	61.6	69.7	102.3	1.08	61.5	71.6	102.3	0.70
Missing	10.4	0.0	91.9	1.37	11.7	0.0	92.7	1.29	14.1	0.0	94.7	1.45
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Not LP-LP	3.9	1.37	**0.7**	**7.1**	4.3	1.75	**0.2**	**8.4**	4.9	1.11	**2.3**	**7.5**
Missing-LP	-6.4	1.79	**-10.6**	**-2.2**	-5.3	1.89	**-9.7**	**-0.9**	-2.7	1.69	-6.7	1.3

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Household Size

The modal number of siblings was one for First, and two for Third and Sixth class pupils, while the mean number of siblings was two (SE=0.078) for First class, 2.4 (SE=0.071) for Third class and 2.5 (SE=0.066) for Sixth class pupils. There was considerable variation in the number of siblings, ranging from none to 20. However, most (at least 78% at any grade level) had three siblings or fewer. At each grade level, mean achievement has a negative correlation with the number of siblings (Table 6.3). The correlation was moderate for Sixth class pupils (r=.25) and weak-to-moderate for First and Third class pupils[1] (r=.14 and r=.16, respectively).

Table 6.3: Correlations between number of siblings and mean reading achievement scores, by grade level

	r	t	p
1st	**-0.13**	-5.79	<.001
3rd	**-0.16**	-3.82	<.001
6th	**-0.25**	-10.13	<.001

Significant differences in bold. For assistance in interpreting Table, see Inset 3.2 on page 34.

A majority, ranging from 54% of Sixth class to 57% in First class pupils have either one or two siblings (Table 6.4). Across each of the grade levels, those who have two siblings have significantly higher mean reading scores than those with more than four siblings, and those for whom number of siblings is unknown. For pupils with more than four siblings this difference is approximately one-third of a standard deviation across grade levels, while it is up to two-third (First class) for pupils where data are unknown. Data relating to the number of siblings were combined with the number of parents or guardians to provide an estimate of the total number of people living with each pupil. While there was considerable variety in household size (ranging from one other person to 22 other people), the mean household size for each grade level, excluding the pupils themselves, was close to 4 people. On average, First class pupils lived with 3.7 people (SE=0.076), compared to 4.1 (SE=0.066) for Third class and 4.2 (SE=0.059) for Sixth class. While up to 7% of

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[1] One Third class pupil had 20 siblings, considerably more than any other pupil. As this outlier exerted a disproportionate effect on measures of linear association, the pupil was excluded from analyses relating to siblings and family size.

pupils (First class) lived with only one other person, close to 1% at each grade level shared a home with at least 10 other people. As with number of siblings, achievement was negatively correlated with the number of people living in the household, and the strength of the correlation increased from First (weak) through Third and Sixth (weak to moderate) class (Table 6.5).

Table 6.4: Number of siblings, and mean achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
No siblings	11.6	13.0	102.3	1.05	7.1	8.1	102.4	1.81	5.0	5.9	105.8	1.16
1 sibling	28.1	31.7	102.2	0.88	23.0	26.3	104.2	1.02	22.1	26.0	104.6	0.79
2 siblings	22.4	25.2	102.0	1.13	23.7	27.1	101.7	1.22	23.5	27.8	102.2	0.86
3 siblings	13.3	15.0	99.5	1.06	16.5	18.9	100.0	1.56	15.7	18.5	98.3	1.29
4+ siblings	13.4	15.1	96.9	1.10	17.2	19.7	95.8	1.42	18.5	21.8	95.7	0.94
Missing	11.4	0.0	92.6	1.22	12.6	0.0	93.4	1.39	15.2	0.0	95.0	1.49
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
None-1 sib	0.1	1.37	-3.6	3.8	-1.8	2.08	-7.5	3.9	1.2	1.40	-2.6	5.0
2 sibs -1 sib	-0.2	1.43	-4.1	3.7	-2.5	1.59	-6.8	1.8	-2.4	1.17	-5.6	0.8
3 sibs -1 sib	-2.7	1.38	-6.5	1.1	-4.2	1.86	-9.3	0.9	-6.3	1.51	**-10.4**	**-2.2**
4+ sibs -1 sib	-5.3	1.41	**-9.1**	**-1.5**	-8.36	1.75	**-13.1**	**-3.6**	-8.9	1.23	**-12.2**	**-5.6**
Missing-1 sib	-9.6	1.50	**-13.7**	**-5.5**	-10.8	1.72	**-15.5**	**-6.1**	-9.6	1.69	**-14.2**	**-5.0**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 6.5: Correlations between number of people living in household and mean reading achievement scores, by grade level

	N	r	t	p
1st	1949	**-.087**	-4.530	<.001
3rd	1849	**-.125**	-3.179	<.001
6th	1812	**-.206**	-8.424	<.001

Significant differences in bold. For assistance in interpreting Table, see Inset 3.2 on page 34.

Socioeconomic Indicators

This section provides information on a number of socioeconomic indicators relating to pupils' parents, including possession of a medical card, employment status, socioeconomic status, and educational attainment.

Parental Employment Status

Information on employment status was obtained from a number of sources. On the Parent Questionnaire, parents were asked to describe the employment situation of themselves and of their partner (if any). If employed, they were asked to indicate the job they (and/or their partner) performed. Also, teachers completing Pupil Rating Forms were asked to indicate the occupation of each pupil's parents. Where Parent Questionnaire data were unavailable, either because the questionnaire was not completed or because the response was too vague to be properly understood or coded, data from the Pupil Rating Forms were used to supplement the dataset. Where data from parents were available, data supplied by teachers were not used.

At each grade level, roughly one-third of pupils' mothers were full-time housewives. Nine per cent of Sixth class pupils' mothers were either unemployed or on long-term sick leave or disability allowance, and this percentage rose to 12% for mothers of First class pupils. The

proportion of pupils whose mothers were employed ranged from 50% in First class to 56% in Sixth (Table 6.6)[2]. At each grade level, pupils whose mothers were employed achieve significantly higher mean scores than those for whom maternal employment data are missing, while, at Third and Sixth class, children of employed mothers have higher mean scores than those whose mothers are unemployed.

Table 6.6: Maternal employment status and mean achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Employed	43.7	48.4	102.3	0.89	47.8	52.7	102.4	1.08	48.3	53.9	102.2	0.81
FT Hsewife	33.0	36.5	100.1	0.69	30.2	33.4	98.4	1.17	31.6	35.2	99.3	0.87
Unemployed	7.7	8.5	96.0	2.22	6.5	7.2	93.5	2.03	5.2	5.8	93.3	1.35
Sick Leave	2.6	2.9	100.9	1.93	3.0	3.3	106.3	3.44	2.6	2.9	101.2	2.18
FT Student	1.3	1.5	97.1	3.09	1.3	1.4	106.7	2.22	0.7	0.8	102.3	4.71
Other	2.1	2.3	97.1	3.38	1.8	1.9	99.2	3.05	1.2	1.3	96.8	3.74
Missing	9.6	0.0	93.1	1.13	9.4	0.0	94.7	1.10	10.3	0.0	95.2	1.39
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Hsewife-Empl	-2.2	1.13	-5.3	0.9	-4.0	1.59	-8.5	0.5	-2.9	1.19	-6.2	0.4
Unemp-Empl	-6.3	2.39	-13.0	0.4	-8.9	2.30	**-15.3**	**-2.5**	-8.9	1.57	**-13.3**	**-4.5**
Sick L-Empl	-1.4	2.13	-7.3	4.5	3.9	3.61	-6.2	14.0	-1.0	2.33	-7.5	5.5
Student-Empl	-5.2	3.22	-14.2	3.8	4.3	2.47	-2.6	11.2	0.1	4.78	-13.3	13.5
Other-Empl	-5.2	3.50	-15.0	4.6	-3.2	3.24	-12.3	5.9	-5.4	3.83	-16.1	5.3
Missing-Empl	-9.2	1.44	**-13.2**	**-5.2**	-7.7	1.54	**-12.0**	**-3.4**	-7.0	1.61	**-11.5**	**-2.5**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Data relating to paternal employment are missing for close to 30% of pupils, mainly because up to one-third of households were headed by single mothers. Of those fathers for whom information was available, approximately 80% at each grade level were employed, while the proportion unemployed or on long-term sick leave or disability allowance ranged from 13% in Third class to 15% in Sixth (Table 6.7). A small percentage of fathers were full-time househusbands or students. At each grade level, pupils whose fathers were employed achieve significantly higher mean scores than those for whom paternal employment data are missing, while First and Sixth class pupils with employed fathers achieve higher mean scores than those whose fathers are unemployed. Finally, amongst First class pupils, those whose fathers are employed have higher mean reading achievement scores than those whose fathers are on sick leave.

Data were combined for maternal and paternal employment to establish the proportion of households where at least one parent was in employment (Table 6.8). Across grade levels, at least three-quarters of households have a minimum of one parent in employment, and pupils living in such households have significantly higher mean achievement scores than pupils living in households where no parent is in employment, or pupils of parents for whom employment status is unknown. The difference in mean achievement between children of employed and unemployed parents ranges from two-fifths of a standard deviation in First and Third class to almost one half in Sixth class.

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[2] Approximately one third of mothers at each grade level were in part-time employment. Paternal part-time employment was much less common, ranging from 4% in First class to 5% in Third class. As the reading achievement scores of pupils whose mothers or fathers were employed part-time or full-time did not differ significantly, part-time and full-time were amalgamated to form an 'employed' category.

Table 6.7: Paternal employment status and mean achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Employed	58.0	81.8	103.0	0.77	60.8	80.8	102.3	1.03	62.4	80.9	102.3	0.75
FT Househusb	1.7	2.3	94.4	1.99	2.0	2.6	95.7	3.26	0.5	0.6	95.5	4.16
Unemployed	8.4	11.8	94.5	1.05	8.9	11.8	94.2	1.90	9.5	12.4	93.5	1.28
Sick Leave	1.8	2.5	94.8	1.70	2.4	3.2	100.6	1.95	3.3	4.3	102.0	1.42
FT Student	0.6	0.8	96.8	2.66	0.6	0.8	110.1	8.53	0.5	0.7	103.7	4.87
Other	0.5	0.8	98.1	6.60	0.6	0.8	96.9	3.66	0.9	1.1	97.7	5.59
Missing	29.1	0.0	96.3	1.10	24.8	0.0	96.5	1.29	22.9	0.0	96.2	1.13
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Househs-Empl	-8.6	2.13	**-14.6**	**-2.6**	-6.6	3.42	-16.2	3.0	-6.8	4.23	-18.6	5.0
Unemp-Empl	-8.5	1.30	**-12.1**	**-4.9**	-8.1	2.16	**-14.2**	**-2.0**	-8.8	1.48	**-13.0**	**-4.6**
Sick L-Empl	-8.2	1.87	**-13.4**	**-3.0**	-1.7	2.21	-7.9	4.5	-0.3	1.61	-4.8	4.2
Student-Empl	-6.2	2.77	-13.9	1.5	7.8	8.59	-16.3	31.9	1.4	4.93	-12.4	15.2
Other-Empl	-4.9	6.64	-23.5	13.7	-5.4	3.80	-16.1	5.3	-4.6	5.64	-20.4	11.2
Missing-Empl	-6.7	1.34	**-10.5**	**-2.9**	-5.8	1.65	**-10.4**	**-1.2**	-6.1	1.36	**-9.9**	**-2.3**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 6.8: Parental employment status and mean achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Job	70.2	76.3	102.1	0.78	74.5	80.7	101.7	1.48	74.8	81.2	101.8	0.73
No job	21.8	23.7	96.3	1.24	17.8	19.3	95.8	1.06	17.3	18.8	94.8	1.05
Missing	7.9	0.0	92.0	1.15	7.7	0.0	94.0	1.19	7.9	0.0	94.3	1.71
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
No Job-Job	-5.8	1.46	**-9.2**	**-2.4**	-5.9	1.82	**-10.2**	**-1.6**	-7.0	1.28	**-10.0**	**-4.0**
Missing-Job	-10.1	1.39	**-13.4**	**-6.8**	-7.7	1.90	**-12.2**	**-3.2**	-7.5	1.86	**-11.9**	**-3.1**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Socioeconomic Status

Aside from employment *status*, data on parental *occupations* were also coded using the ISEI (International Socio-Economic Index) scale of occupational status (Ganzeboom, De Graaf, & Treiman, 1992). The ISEI scale ranges from 16 to 90, and higher scores are associated with higher socioeconomic status. For example, scores of 16 are assigned to domestic cleaners and forestry workers, while scores of 90 are assigned to judges. For pupils in the Literacy Survey, scores were assigned to maternal and paternal occupations, and then combined (highest value taken) to produce a 'family' ISEI score.

As all pupils were attending designated schools, it is unsurprising that many parental ISEI scores tended to cluster at the lower end of the scale (Table 6.9). For example, using cut-off points for Irish 15-year olds in PISA 2000 (Cosgrove, 2004, personal communication), only 18% to 20% pupils in the Literacy Survey could be categorised as having a high family ISEI score, compared to one third of PISA students surveyed, while over half at each grade level fell into the low ISEI category. Moreover, the comparative data refer only to families where at least one parent was employed, as ISEI does not provide a score for those who are homemakers or unemployed (a sizeable minority of Literacy Survey parents). Consequently, while Table 6.9 clearly demonstrates that parents of pupils in the Literacy Survey cluster at the lower end of the socioeconomic scale, it suggests higher average socioeconomic status than is actually the case. At each grade level, pupil

achievement is significantly correlated with family ISEI scores (Table 6.10). The relationship is weak-to-moderate for First class pupils (r=.20), and moderate for Third and Sixth class pupils (r=.25 and r=.23, respectively). Thus, pupils whose parents have higher status occupations tend to have higher achievement scores.

Table 6.9: Percentages of pupils whose family ISEI score falls within Irish PISA 2000 categories of low, medium and high ISEI, by grade level

PISA	Literacy Survey		
	% 1st (N=1576)	% 3rd (N=1567)	% 6th (N=1590)
Low	54.1	56.1	55.1
Medium	25.8	25.5	25.2
High	20.2	18.4	19.7

Table 6.10: Correlations between ISEI score and achievement, by grade level

	N	r	t	p
1st	1576	**0.20**	6.247	<.001
3rd	1567	**0.25**	7.715	<.001
6th	1590	**0.23**	10.656	<.001

Significant differences in bold. For assistance in interpreting Table, see Inset 3.2 on page 34.

Table 6.11 shows the proportion of pupils at each quartile benchmark, based the distribution of ISEI scale scores. The table includes an additional category of 'low income', which refers to pupils whose parents possess a medical card, and/or where no parent is employed in the household (e.g. a lone parent housewife, or a father who is a student and a mother who is unemployed). Across each of the grade levels, pupils whose parents are in the lowest quartile of ISEI occupations have a significantly lower mean reading achievement score than pupils of parents in the highest quartile. Amongst First and Sixth class pupils, those in the lowest quartile have poorer scores than those in the third quartile, and, for Sixth class only, those in the lowest quartile have poorer scores than those in the second quartile. Furthermore, First class pupils in the lowest quartile perform significantly poorer than pupils for whom parental occupational status is unknown, while Sixth class pupils in the lowest quartile perform better than their counterparts in the 'low income' category.

Table 6.11: ISEI quartiles and mean reading achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
1st quartile	19.0	20.8	98.6	1.07	19.3	21.3	99.52	1.18	21.6	24.2	98.02	0.97
2nd quartile	17.1	18.7	100.9	1.04	18.3	20.3	99.16	1.06	15.6	17.4	101.4	0.77
3rd quartile	19.6	21.5	103.3	0.82	18.3	20.3	100.7	1.22	21.0	23.5	103.1	0.95
4th quartile	15.9	17.4	105.6	1.55	18.0	19.9	108.3	1.42	16.0	17.9	106.6	1.21
Low income	19.7	21.6	96.1	0.93	16.5	18.3	95.5	1.47	15.2	17.0	93.7	1.07
Missing	8.7	0.0	92.6	1.22	9.5	0.0	94.8	1.29	10.5	0.0	95.0	1.41
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
2nd-1st	2.3	1.49	-1.8	6.4	-0.4	1.59	-4.7	4.0	3.4	1.24	-0.02	6.7
3rd-1st	4.7	1.35	**1.0**	**8.4**	0.5	1.70	-4.1	5.2	5.1	1.36	**1.4**	**8.8**
4th-1st	7.0	1.88	**1.9**	**12.1**	8.7	1.85	**3.7**	**13.7**	8.5	1.55	**4.3**	**12.8**
Low inc-1st	-2.5	1.42	-6.4	1.4	-4.0	1.89	-9.2	1.1	-4.3	1.44	**-8.3**	**-0.4**
Missing-1st	-6.0	1.62	**-10.4**	**-1.6**	-4.8	1.75	-9.5	0.01	-3.1	1.71	-7.7	1.6

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Medical Card Possession

Parents of half of First and Third class pupils, and 45% of Sixth class pupils possessed a medical card. At each grade level, those whose parents did not have a medical card have significantly higher mean reading achievement scores than do pupils whose parents had a medical card or for whom data are unavailable (Table 6.12). Average differences between those covered or not covered by the medical card are approximately half of a standard deviation.

Table 6.12: Medical card possession and mean achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Yes	44.3	49.9	97.04	0.90	44.8	50.8	97.0	0.62	38.6	45.1	97.1	0.62
No	44.6	50.1	104.7	0.74	43.3	49.2	105.1	0.81	47.0	54.9	103.9	0.81
Missing	11.1	0.0	93.0	1.20	12.0	0.0	93.0	1.44	14.4	0.0	95.0	1.44
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
No-Yes	7.7	1.17	**4.9**	**10.4**	8.1	1.02	**5.7**	**10.5**	7.7	1.17	**4.9**	**10.4**
Missing-Yes	-4.0	1.50	**-7.6**	**-0.5**	-4.0	1.57	**-7.7**	**-0.3**	10.8	3.77	**1.9**	**19.6**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Parental Educational Attainment

Across each of the grade levels, the modal response for both mothers and fathers of pupils was that they completed Junior Cycle education (Tables 6.13 and 6.14). However, approximately one in five parents for whom data are available had not completed any post-primary school exam. This is considerably higher than the proportion that would be expected from a nationally representative sample (e.g., data from the 2002 census indicate that only approximately 6% of those aged between 20 and 44 left school with no qualification[3]) (Central Statistics Office, 2004). For both mothers and fathers for whom data are available, the proportion without any qualification increased from First class through Third and Sixth class, while the proportions who had completed Leaving Certificate or a third level qualification decreased.

Table 6.13: Maternal educational attainment and mean achievement, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
No PP exam	15.5	19.3	96.5	1.24	18.8	23.3	94.5	1.38	18.4	23.9	95.2	0.87
Junior cycle	29.2	36.3	100.1	0.91	28.8	35.7	99.9	1.19	28.8	37.4	100.7	0.86
Leaving Cert	18.4	22.8	104.1	1.03	16.9	20.9	104.3	1.22	15.7	20.5	104.3	0.93
ISCED 4	1.6	2.0	100.4	1.43	2.4	3.0	106.2	1.59	1.7	2.2	103.6	1.06
3rd cert/dip	12.2	15.2	104.7	2.34	9.9	12.2	107.7	1.38	8.8	11.5	106.1	2.14
3rd degree	3.6	4.5	106.7	2.51	4.0	5.0	111.2	2.58	3.5	4.5	114.6	3.01
Missing	19.6	0.0	94.7	1.06	19.1	0.0	94.7	0.86	23.0	0.0	95.1	1.12

Between 17% (First class) and 21% (Sixth class) of fathers, and between 19% and 24% (First and Third class, respectively) of mothers had not sat any exam. Approximately 40% of fathers had completed Junior Cycle only, compared to slightly more than a third of mothers. Leaving Certificate was the highest level of education attained by 19% to 23% of fathers, and 21% to 23% of mothers, while between 16% (Sixth class) and 20% (First class) of parents had completed a third level certificate/diploma or degree. Excluding missing cases, at each of the grade levels, pupils whose mothers or fathers had never sat a post-primary school exam achieved the lowest mean

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[3] Educational attainment of those aged 20 – 44 was taken as the most suitable comparison, as most pupils' parents were likely to fall between these ages.

reading score. There was a minimum of at least half a standard deviation between the scores of those whose parents had no post-primary exam and those whose parents had completed the Leaving Certificate. Highest mean scores were found amongst those whose mother or father had a degree.

Table 6.14: Paternal educational attainment and mean achievement, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
No PP exam	9.7	17.4	96.6	1.22	11.7	19.2	93.9	1.29	12.7	21.1	97.6	0.86
Junior cycle	21.9	39.1	101.8	0.99	25.9	42.7	102.9	0.86	25.7	42.8	101.6	0.70
Leaving Cert	13.2	23.5	104.8	0.88	13.0	21.5	103.6	1.16	11.2	18.6	104.9	1.28
ISCED 4	0.5	0.9	104.4	1.32	0.6	0.9	111.6	1.71	0.8	1.3	105.0	1.23
3rd cert/dip	6.4	11.4	104.1	2.41	5.9	9.7	108.8	2.40	5.4	9.0	107.7	2.09
3rd degree	4.3	7.7	107.9	3.10	3.7	6.0	112.5	2.50	4.4	7.2	112.8	3.27
Missing	44.0	0.0	97.0	0.95	39.2	0.0	96.0	1.13	39.9	0.0	95.8	0.95

A minority of parents (ranging from 1% to 3%) had completed ISCED 4 courses, equivalent to level 4 of the International Standard Classification of Education (OECD, 1999), and including courses such as apprenticeships and Vocational Preparation and Training (NCVA level 2) or Post-Leaving Certificate (PLC) courses. Tables 6.13 and 6.14 treat ISCED 4 as a separate category. However, in most cases, those who had completed ISCED 4 also indicated their other educational attainments (e.g., Leaving Certificate). As those in the ISCED 4 category represent a small group, and as a smaller number of comparison groups was considered preferable for the purposes of modelling, those who had attained an ISCED 4 level of education were redistributed by their other educational attainments (where indicated).

Table 6.15 shows the relationship between mean achievement and combined parental educational attainment (highest maternal or paternal value taken), where those who were categorised as ISCED 4 are redistributed across other categories. Between 14% (First class) and 16% (Third and Sixth class) of pupils' parents had no post-primary qualification, while just over one-third of pupils' parents at each grade level had completed Junior Cycle only. Approximately one-quarter of pupils at each grade level came from households where the highest level of parental education was Leaving Certificate, while just under 8% at each grade level had a parent with a degree.

Table 6.15: Parental educational attainment (ISCED 4 re-distributed) and mean achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
No exam	11.8	14.3	95.3	1.51	13.3	16.1	92.5	1.62	13.1	16.5	93.7	1.16
Junior cycle	27.6	33.4	99.4	0.92	30.2	36.4	99.7	1.15	29.2	36.7	99.5	0.76
Leaving Cert	21.9	26.5	103.5	0.86	21.1	25.5	103.0	1.05	20.1	25.2	103.5	0.79
3rd cert/dip	14.8	18.0	104.2	1.10	11.8	14.2	106.8	1.25	11.1	14.0	106.2	0.80
3rd degree	6.4	7.7	106.3	1.99	6.5	7.8	110.8	2.13	6.0	7.6	112.3	1.78
Missing	17.5	0.0	94.0	1.09	17.2	0.0	94.0	1.00	20.5	0.0	94.3	1.21
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
None-LC	-8.2	1.74	**-12.9**	**-3.5**	-10.5	1.93	**-15.8**	**-5.2**	-9.8	1.40	**-13.6**	**-6.0**
JC-LC	-4.1	1.26	**-7.5**	**-0.7**	-3.3	1.56	-7.5	0.9	-4.0	1.10	**-7.0**	**-1.0**
Cert-LC	0.7	1.40	-3.1	4.5	3.8	1.63	-0.7	8.3	2.7	1.12	-0.4	5.8
Degree-LC	2.8	2.17	-3.1	8.7	7.8	2.37	**1.3**	**14.3**	8.8	1.95	**3.5**	**14.1**
Missing-LC	-9.5	1.39	**-13.3**	**-5.7**	-9.0	1.45	**-13.0**	**-5.0**	-9.2	1.45	**-13.1**	**-5.3**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

At each of the three grade levels, those whose parent(s) completed Leaving Certificate achieve significantly higher mean scores than those whose parent(s) sat no exam, or for whom data are missing. In each case, the magnitude of the difference is at least half a standard deviation. Amongst First and Sixth class pupils, those whose parent(s) completed only Junior Cycle achieve significantly lower mean scores than those whose parent(s) completed Senior Cycle, while Third and Sixth class pupils for whom at least one parent had a degree achieve higher mean scores than those whose highest family educational attainment was Leaving Certificate.

Early School Leavers

Table 6.15 is based on the highest level of educational attainment within a family. In this section, the reverse is examined, and *lowest* educational attainment is considered. Specifically, Table 6.16 presents the proportion of pupils for whom *at least one* parent is an early school leaver. Early school leaving is defined as having completed primary school only, or having left the formal education system without any qualifications (i.e., not having taken the Junior Certificate examination). As can be seen, the proportion of pupils for whom *at least one* of their parents was an early school leaver ranges from 25% in First class to 31% for Sixth class pupils. Across each grade level, pupils whose parents were early school leavers have a significantly lower mean reading score than pupils whose parents are not early school leavers. In addition, pupils for whom data are unavailable for parental attainment perform significantly poorer than pupils of parents who are not early school leavers.

Table 6.16: Parental early school leaver status (minimum one parent early school leaver), and mean reading achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
ESL Yes	20.5	24.9	97.1	1.15	24.7	29.6	95.1	1.22	24.6	30.9	96.8	0.75
ESL No	62.1	75.1	102.7	0.71	58.6	70.4	103.9	1.00	55.1	69.1	103.6	0.70
Missing	17.3	0.0	94.0	1.09	16.7	0.0	93.7	0.96	20.3	0.0	94.3	1.23
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Yes-No	-5.7	1.35	**-8.8**	**-5.5**	-8.8	1.58	**-12.5**	**-5.1**	-6.8	1.03	**-9.2**	**-4.4**
Missing-No	-8.7	1.30	**-11.7**	**-5.7**	-10.2	1.39	**-13.5**	**-6.9**	-9.3	1.42	**-12.6**	**-6.0**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Family as a Learning Environment

This section contains data from a number of sources: parents' self-descriptions of their engagement in reading with their child, teachers' views on parental engagement, and pupils' own descriptions of their reading-related interactions with their families. It also outlines parents' descriptions of their own reading habits, the educational resources available in their home, and their expectations for their child's educational attainment.

Parent-Child Interaction Related to Reading

Approximately a quarter of parents at each of the three grade levels indicated that someone in their home read to their child on a daily basis before the child started school, while half indicated that this happened a few times a week, and 5% that it rarely or never happened (Table 6.17). At each grade level, pupils read to on a daily basis have higher mean scores than those read to a few times a week, a few times a month, or rarely, and those whose for whom data are missing. The difference in mean achievement score between those read to daily and those rarely or never read to is a full standard deviation, where Sixth class pupils are concerned, and close to a standard deviation where First and Third class are concerned.

Table 6.17: Frequency of someone in the home reading to child (pre-school), and mean reading achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Every day	22.1	24.8	105.4	1.08	20.8	23.9	107.6	1.49	23.9	28.1	107.9	1.09
Few times a week	46.3	52.1	101.2	0.78	44.3	50.7	100.4	1.09	41.9	49.4	99.4	0.72
Few times month	16.8	18.8	96.9	1.03	17.0	19.5	97.1	1.15	13.6	15.9	96.2	0.94
Rarely / Never	3.9	4.3	91.8	1.33	5.2	6.0	93.4	1.13	5.6	6.6	92.9	1.22
Missing	11.0	0.0	92.0	1.32	12.6	0.0	92.8	1.28	15.0	0.0	95.1	1.41
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Few wk- Every day	-4.2	1.33	**-7.7**	**-0.7**	-7.2	1.85	**-12.1**	**-2.3**	-8.5	1.31	**-11.9**	**-5.1**
Few m- Every day	-8.5	1.49	**-12.4**	**-4.6**	-10.5	1.88	**-15.5**	**-5.5**	-11.7	1.44	**-15.5**	**-7.9**
Hardly- Every day	-13.6	1.71	**-18.1**	**-9.1**	-14.2	1.87	**-19.1**	**-9.3**	-15.0	1.64	**-19.3**	**-10.7**
Miss- Every day	-13.4	1.71	**-17.9**	**-8.9**	-14.8	1.96	**-20.0**	**-9.6**	-12.8	1.78	**-17.5**	**-8.1**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Between 38% and 48% of parents (First and Sixth class, respectively) indicated that, while in the Infants classes, their child had read to someone every day, while a further 38% (Sixth class) to 43% (First class) indicated that their child did so a few times a week (Table 6.18). However, between 7% and 10% of parents (Sixth class and First class, respectively) indicated that their child rarely or never read to anyone at home while in the Infants classes. At each grade level, those who read to someone every day have significantly higher mean achievement scores than those that did so a few times a month, or rarely or never, or for whom data are missing. Furthermore, amongst First class pupils, daily readers achieve a higher mean score than those who read to someone a few times a week.

Table 6.18: Frequency of child reading to someone in the home when in Infant classes, and mean reading achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Every day	34.0	38.5	104.6	0.86	35.6	40.7	103.5	1.35	40.7	48.0	103.1	0.85
Few times a week	37.8	42.8	100.8	0.83	36.1	41.3	101.4	1.06	32.2	38.1	101.0	0.65
Few time month	7.4	8.3	95.9	1.16	7.3	8.4	97.2	1.50	6.0	7.1	94.9	1.68
Rarely / Never	9.2	10.4	92.5	1.19	8.4	9.6	92.4	1.64	5.7	6.8	92.4	1.66
Missing	11.6	0.0	92.5	1.12	12.6	0.0	92.8	1.27	15.3	0.0	94.7	1.44
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Few wk- Every day	-3.8	1.20	**-6.9**	**-0.7**	-2.1	1.72	-6.6	2.4	-2.1	1.07	-4.9	0.7
Few m- Every day	-8.7	1.44	**-12.5**	**-4.9**	-6.3	2.02	**-11.6**	**-1.0**	-8.2	1.88	**-13.2**	**-3.2**
Hardly- Every day	-12.1	1.47	**-16.0**	**-8.2**	-11.1	2.12	**-16.7**	**-5.5**	-10.7	1.86	**-15.6**	**-5.8**
Missing- Every day	-12.1	1.41	**-15.8**	**-8.4**	-10.7	1.85	**-15.6**	**-5.8**	-8.4	1.67	**-12.8**	**-4.0**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

A large proportion of parents, from 40% at First class to 88% at Sixth class, did not read a bedtime story to their child in the week prior to completing the Parent Questionnaire (Table 6.19). Ten percent of parents of First class pupils reported that they did so for six or seven days of the preceding week, but only 5% of Third class and 2% of Sixth class parents did so. First class pupils for whom data on this item are missing perform significantly poorer than pupils whose parents read a bedtime story one to three days in the last week, while, amongst Sixth class pupils, those whose parents did not read a bedtime story perform significantly better than those whose parents read them a story on between one and three days.

Table 6.19: Frequency parents reading a bedtime story aloud, by mean reading achievement scores and grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Didn't read	32.3	39.6	100.9	1.01	50.8	65.0	102.0	1.16	63.4	87.6	101.6	0.71
1-3 days	29.5	36.2	100.1	0.84	18.5	23.7	98.6	1.06	6.2	8.5	97.0	1.03
4-5 days	11.6	14.2	102.8	1.19	5.0	6.4	101.1	1.66	1.2	1.7	97.5	2.95
6-7 days	8.2	10.0	103.5	1.53	3.8	4.9	101.8	1.61	1.6	2.2	98.5	2.42
Missing	18.4	0.0	95.06	0.93	21.9	0.0	95.9	1.12	27.6	0.0	97.1	1.17
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Didn't -1/3days	0.8	1.31	-2.7	4.3	3.4	1.57	-0.7	7.5	4.6	1.25	**1.3**	**7.9**
4/5-1/3days	2.7	1.46	-1.1	6.5	2.5	1.97	-2.7	7.7	0.5	3.12	-7.7	8.7
6/7-1/3days	3.4	1.75	-1.2	8.0	3.2	1.93	-1.9	8.3	1.5	2.63	-5.4	8.4
Missing-1/3days	-5.04	1.25	**-8.3**	**-1.7**	-2.7	1.54	-6.8	1.4	0.1	1.56	-4.0	4.2

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

A minority (16%) of parents of First class pupils indicated that they did not read a book with their child in the week prior to completing the questionnaire, compared to 38% of Third class and 73% of Sixth class parents (Table 6.20). Amongst First class pupils, those whose parents read a book with them on between one and three days perform significantly better than pupils for whom there are no data available. In contrast, Sixth class pupils whose parents did not read a book with them in the week prior to completing the questionnaire have a significantly higher mean reading score than pupils whose parents did so on between one and three days.

Table 6.20: Frequency of parent and child reading a book together, by mean reading achievement scores and grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Didn't do it	13.6	16.2	102.6	1.40	29.9	38.3	103.8	1.24	52.8	72.5	103.0	0.67
1-3 days	37.8	44.9	100.4	0.84	32.5	41.7	99.6	1.12	15.1	20.7	95.6	1.15
4-5 days	23.9	28.3	101.2	0.97	10.6	13.5	98.7	1.48	3.2	4.4	91.0	2.23
6-7 days	8.9	10.6	101.8	1.71	5.0	6.5	99.1	1.38	1.7	2.3	95.6	2.15
Missing	15.7	0.0	93.9	1.00	22.0	0.0	96.3	1.37	27.2	0.0	97.8	1.18
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Didn't -1/3days	2.2	1.63	-2.1	6.5	4.2	1.67	-0.2	8.6	7.4	1.33	**3.9**	**10.9**
4/5-1/3days	0.8	1.28	-2.6	4.2	-0.9	1.86	-5.8	4.0	-4.6	2.51	-11.2	2.0
6/7-1/3days	1.4	1.91	-3.6	6.4	-0.5	1.78	-5.2	4.2	0.0	2.44	-6.4	6.4
Miss-1/3days	-6.5	1.31	**-9.9**	**-3.1**	-3.3	1.77	-8.0	1.4	2.2	1.65	-2.1	6.5

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Less than 10% of parents of First class pupils indicated that they did not help their child with a new word in the week prior to completing the questionnaire, compared to 20% of those in Third and 47% of those in Sixth class (Table 6.21). First class pupils whose parents helped them with a new word between one and three days of the last week have a significantly higher mean reading score than pupils for whom data are unavailable. Amongst Third and Sixth class pupils, those whose parents helped them on between one and three days perform significantly poorer than pupils whose parents did not help them with a new word in the last week. Sixth class pupils who had been helped on between four and five days in the last week, and Third class pupils who had been helped on six or seven days each performed poorer than their counterparts who had been helped on between one and three days.

Table 6.21: Frequency of parent helping child with a new word, by mean reading achievement scores and by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Didn't help	7.9	9.4	102.0	1.51	15.6	19.7	106.0	1.15	34.7	47.0	104.5	0.78
1-3 days	33.1	39.7	102.0	0.99	38.9	49.1	101.1	1.10	27.1	36.7	98.7	0.75
4-5 days	28.6	34.3	99.6	0.74	17.1	21.6	97.5	1.33	8.3	11.2	93.7	1.16
6-7 days	13.8	16.6	101.1	1.07	7.5	9.5	95.5	1.58	3.7	5.0	98.9	1.97
Missing	16.5	0.0	94.8	1.15	20.9	0.0	97.1	1.44	26.1	0.0	97.5	1.19
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Didn't -1/3days	0.0	1.81	-4.8	4.8	4.9	1.59	**0.7**	**9.1**	5.8	1.08	**2.9**	**8.7**
4/5-1/3days	-2.4	1.24	-5.7	0.9	-3.6	1.73	-8.2	1.0	-5.0	1.38	**-8.6**	**-1.4**
6/7-1/3days	-0.9	1.46	-4.7	2.9	-5.6	1.93	**-10.7**	**-0.5**	0.2	2.11	-5.4	5.8
Missing-1/3days	-7.2	1.52	**-11.2**	**-3.2**	-4.0	1.81	-8.8	0.8	-1.2	1.41	-4.9	2.5

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

A majority of parents, ranging from 64% in Sixth to 97% in First class, reported that they had listened to their child read in the last week (Table 6.22). First and Third class pupils whose parents had listened to their child read on between one and three days have a significantly higher mean score than those for whom data are missing. Amongst Sixth class pupils, those whose parents listened to them read on between one and three days achieve significantly higher scores than those who were listened to between four and five days, but significantly poorer scores than those whose parents did not listen to them read.

Table 6.22: Frequency of parents listening to their child read, by mean reading achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Didn't listen	2.3	2.7	98.5	2.87	7.7	9.1	105.1	1.64	28.2	36.3	105.5	0.85
1-3 days	25.7	29.8	100.4	0.99	34.1	40.6	102.0	1.06	30.7	39.5	99.9	0.70
4-5 days	37.7	43.7	100.8	0.78	28.4	33.7	100.0	1.20	12.4	15.9	94.4	1.06
6-7 days	20.6	23.8	102.9	1.13	13.9	16.6	98.7	1.46	6.4	8.3	97.4	1.85
Missing	13.7	0.0	93.0	1.31	15.9	0.0	94.5	1.54	22.3	0.0	97.1	1.27
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Didn't -1/3days	-1.9	3.04	-9.9	6.1	3.1	1.95	-2.1	8.3	5.6	1.10	**2.7**	**8.5**
4/5-1/3days	0.4	1.26	-2.9	3.7	-2.0	1.60	-6.2	2.2	-5.5	1.27	**-8.9**	**-2.1**
6/7-1/3days	2.5	1.50	-1.5	6.5	-3.3	1.80	-8.1	1.5	-2.5	1.98	-7.7	2.7
Miss-1/3days	-7.4	1.64	**-11.7**	**-3.1**	-7.5	1.87	**-12.4**	**-2.6**	-2.8	1.45	-6.6	1.0

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Pupils were asked if they liked to tell their family about what they were reading. A large majority of First class pupils (71.9%) agreed that they liked to tell their family about what they were reading. However, their mean achievement scores are not significantly different to the 13.4% of pupils who disagreed that they liked to tell their family about what they were reading, or to the 14.7% of pupils who were unsure how they felt. Similarly, most Third class pupils (68.5%) agreed or agreed a lot that they liked to tell their family about what they were reading. However, only half (51.2%) of Sixth class pupils agreed that this was true. There are no significant differences in achievement outcomes based on pupil agreement or disagreement with the statement.

Between 74% (Sixth class) and 84% (First class) of pupils' parents reported that they had discussed something they had read with their child within the previous week (Table 6.23). Across each of the three grade levels, those for whom data are missing have a significantly lower mean achievement score than pupils whose parents discussed something on between one and three days in the last week.

Table 6.23: Frequency of parents discussing something their child read, by mean achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Didn't discuss	13.6	16.2	99.6	0.98	16.8	20.4	99.0	1.09	20.9	25.8	101.3	0.83
1-3 days	34.1	40.7	102.1	1.09	37.6	45.6	102.6	1.09	39.4	48.5	101.4	0.66
4-5 days	24.1	28.7	99.9	0.64	17.6	21.4	101.3	1.54	14.1	17.4	99.6	1.20
6-7 days	12.0	14.4	103.1	1.39	10.4	12.6	101.6	1.41	6.8	8.4	102.8	2.16
Missing	16.2	0.0	93.9	1.04	17.6	0.0	93.3	1.28	18.8	0.0	94.9	1.32
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Didn't -1/3days	-2.5	1.47	-6.4	1.4	-3.6	1.54	-7.7	0.5	-0.1	1.06	-2.9	2.7
4/5-1/3days	-2.2	1.26	-5.5	1.1	-1.3	1.89	-6.3	3.7	-1.8	1.37	-5.4	1.8
6/7-1/3days	1.0	1.77	-3.7	5.7	-1.0	1.78	-5.7	3.7	1.4	2.26	-4.6	7.4
Missing-1/3days	-8.2	1.51	**-12.2**	**-4.2**	-9.3	1.68	**-13.7**	**-4.9**	-6.5	1.48	**-10.4**	**-2.6**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Help With English Homework

Most pupils received help with English homework, typically from more than one person. Generally, pupils received help from mothers or female guardians (ranging from 93% of First class to 80% of Sixth class pupils). Fathers or male guardians helped with homework in at least one third of cases, while siblings helped between 18% and 21% of pupils, depending on grade level. Up to 9% of pupils received other sources of help, including grandparents, childminders, other relatives, and staff in Homework Clubs. At each grade level, parents of a small proportion of pupils (ranging from 1% in First class to 8% in Sixth class) indicated that their child received no help with English homework. Finally, between 2% to 3% of pupils' parents indicated that their child did not receive any homework.

Data on various sources of help were combined to create a dichotomous variable, indicating if some or no help was given with homework. As can be seen from Table 6.24, Sixth class pupils who received some help with homework achieve significantly lower mean scores than those who received no help. Amongst Third and Sixth class pupils, those who received help achieve significantly higher scores than those for whom data are missing.

Table 6.24: Source of help with English homework and mean reading achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Someone	85.8	99.2	101.1	0.79	83.9	97.2	100.9	1.07	77.1	92.0	100.6	0.66
No-one	0.7	0.8	108.8	3.43	2.4	2.8	107.2	3.00	6.7	8.0	106.9	1.39
Missing / N/A	13.5	0.0	92.6	1.19	13.7	0.0	93.2	1.17	16.2	0.0	94.2	1.39
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
No-one- Some	7.7	3.52	-0.5	15.9	6.3	3.19	-1.2	13.8	6.3	1.54	**2.7**	**9.9**
Missing-Some	-8.5	3.63	-17.0	0.0	-7.7	3.22	**-15.3**	**-0.1**	-6.4	1.97	**-11.0**	**-1.8**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Although only a small minority of parents indicated that their child received no help with English homework, it would appear that a sizeable minority receive help infrequently. As can be seen from Table 6.25, 24% of Sixth class pupils' parents reported that their child typically received no help with English homework, as did parents of 4% of First class and 8% of Third class pupils. Approximately 40% at each grade level received between one and 10 minutes help, while few (4% to 6%) received more than 30 minutes help a day. At each grade level, those who received one to 10 minutes help a day have significantly higher mean achievement than do those who received 21 to 30 minutes help, those who received more than 30 minutes help, or those for whom data are missing. Amongst First and Sixth class pupils, those who received one to 10 minutes help also achieve higher mean scores than those who received 11 to 20 minutes help a day. Finally, Sixth class pupils who typically received no help with English homework achieve a higher mean score than those who were helped for between one and 10 minutes a day.

Table 6.25: Typical daily minutes help with English homework, and mean reading achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
None	3.7	4.2	108.6	1.83	6.8	7.8	108.3	2.13	20.2	23.9	107.1	0.90
1-10 mins	34.8	39.6	105.1	0.96	37.6	43.1	103.9	1.18	31.3	37.1	102.9	0.87
11-20 mins	35.3	40.1	98.9	0.77	28.0	32.1	99.9	1.07	20.1	23.8	97.6	0.74
21-30 mins	10.3	11.7	95.2	1.17	9.7	11.1	93.4	1.14	8.5	10.0	92.9	1.22
> 30 mins	3.9	4.4	91.9	1.29	5.0	5.8	89.6	1.78	4.4	5.2	88.5	1.77
Missing	12.0	0.0	92.5	1.36	12.8	0.0	93.5	1.24	15.5	0.0	95.0	1.36
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
None- 1-10	3.5	2.07	-2.1	9.1	4.4	2.44	-2.2	11.0	4.2	1.25	**0.8**	**7.6**
11-20-1-10	-6.2	1.23	**-9.6**	**-2.8**	-4.0	1.59	-8.4	0.3	-5.3	1.14	**-8.4**	**-2.2**
21-30-1-10	-9.9	1.51	**-14.0**	**-5.8**	-10.5	1.64	**-15.0**	**-6.0**	-10.0	1.50	**-14.1**	**-5.9**
>30-1-10	-13.2	1.61	**-17.6**	**-8.8**	-14.3	2.14	**-20.1**	**-8.5**	-14.4	1.97	**-19.8**	**-9.0**
Missing-1-10	-12.6	1.67	**-17.1**	**-8.1**	-10.4	1.71	**-15.1**	**-5.7**	-7.9	1.6	**-12.3**	**-3.5**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Teacher Ratings of Parental Participation

On each Pupil Rating Form teachers were asked to rate parents' participation in various aspects of their child's reading activities and education. They were asked to indicate their perception of the extent of parental involvement in reading homework, interest in their child's progress in school, parent awareness of what was happening at school, and parent support and encouragement for the child. At each grade level, at least 81% of parents were rated as having average or above average involvement across these areas. Moreover, ratings for each of these items were significantly correlated with one another at each grade level. Therefore, a composite score was generated using factor analysis, with a mean of 0 and a standard deviation of 1 (more detailed data describing the relationship between teacher ratings on each aspect of parental involvement and pupil achievement can be found in Appendix A).

As can be seen from Table 6.26, there is a moderate correlation for First class and moderate to strong correlations for Third and Sixth class between teacher ratings for parent contribution and achievement. Thus, pupils whose parents' contributions were rated by teachers as good or very good tended to achieve higher scores than those whose parents' contributions were rated less positively.

Table 6.26: Correlations between teacher ratings of parental contribution and reading achievement scores, by grade level

	r	t	p
1st	**0.366**	17.895	<.001
3rd	**0.393**	12.133	<.001
6th	**0.443**	15.767	<.001

For assistance in interpreting Table, see Inset 3.2 on page 34.

Educational Resources in the Home

Parents were asked to indicate whether their child used an atlas, a family dictionary or a computer (not including a game console) in the home. At First class, the most common resource used was a computer (42.3% of pupils [SE=2.09]). Only 18.0% (SE=1.11) used an atlas, while 17.2% (SE=1.40) used a dictionary. Dictionary use increased amongst older pupils, with 47.6% (SE=2.68) of Third class and 69.9% (SE=1.80) of Sixth class pupils using a dictionary in their home. Half (50.4% [SE=2.34]) of Sixth class pupils used an atlas at home, compared to 30.6% (SE=2.04) of Third class pupils. Computer use ranged from 46.2% (SE=1.89) of Third class to 54.2% (SE=1.93) of Sixth class pupils.

The number of resources used were summed, and linked to achievement scores. As can be seen from Table 6.27, there is a gradual increase in mean achievement scores that parallels the increase in number of resources used. At each of the three grade levels, pupils who used one educational resource have a significantly higher mean reading score than pupils who used no resources, or for whom data are missing, but a poorer score than pupils who used two or three resources.

Table 6.27: Number of learning resources used in the home, and mean reading achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
0 resources	37.8	42.2	97.7	0.94	21.1	23.8	94.3	1.20	8.4	9.8	91.6	1.37
1 resource	37.4	41.7	101.6	0.77	35.1	39.5	98.8	1.00	26.7	31.0	97.1	0.73
2 resources	11.2	12.4	107.7	1.32	22.4	25.2	105.5	0.94	29.6	34.4	101.6	0.75
3 resources	3.3	3.7	108.6	2.42	10.2	11.5	111.9	1.39	21.5	24.9	108.2	0.96
Missing	10.3	0.0	91.9	1.37	11.2	0.0	92.6	1.30	13.9	0.0	94.6	1.47
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
0 res – 1 res	-3.9	1.22	**-7.1**	**-0.7**	-4.5	1.56	**-8.6**	**-0.4**	-5.5	1.55	**-9.6**	**-1.4**
2 res – 1 res	6.1	1.53	**2.1**	**10.1**	6.7	1.37	**3.1**	**10.3**	4.5	1.05	**1.7**	**7.3**
3 res – 1 res	7.0	2.54	**0.3**	**13.7**	13.1	1.71	**8.6**	**17.6**	11.1	1.21	**7.9**	**14.3**
Missing – 1 res	-9.7	1.57	**-13.8**	**-5.6**	-6.2	1.64	**-10.5**	**-1.9**	-2.5	1.64	**-6.8**	**1.8**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Approximately a quarter of parents at each grade level reported that, excluding school books, magazines or comics, they had either no books, or less than ten books in their home (Table 6.28). The commonest response (33% to 35% of pupils) was that there were between 11 and 50 books in the home. Using this group as a comparison, they have significantly higher mean achievement scores at each grade level than those with no books, or less than 10 books in the home. However, they have significantly poorer mean achievement scores than those whose parents report either 101 – 250 books, or more than 250 books in the home. Amongst Sixth class pupils, those whose parents reported between 11 and 50 books in the home achieve lower mean scores than those whose parents report having between 51 and 100 books. Pupils for whom data on this item are missing perform poorer than those with between 11 and 50 books in the home, but only in Third

class. There is a pattern across grade levels of an increase in achievement scores mirroring an increase in number of books in the home.

Table 6.28: Number of books in the home and mean achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
None	3.3	3.7	93.0	2.06	2.8	3.1	89.7	1.90	2.3	2.7	90.1	2.05
1 – 10 books	19.3	21.7	96.3	1.00	19.6	22.2	94.3	1.32	16.8	19.6	93.5	0.98
11 – 50 books	30.9	34.7	100.2	0.92	30.6	34.6	99.6	1.06	28.2	33.0	98.7	0.68
51 – 100 books	18.2	20.4	101.6	1.12	17.4	19.8	103.2	1.46	17.3	20.2	103.2	0.67
101–250 books	10.4	11.7	107.1	1.22	10.8	12.2	108.1	1.25	12.1	14.1	106.4	1.05
>250 books	6.8	7.7	110.7	1.34	7.1	8.0	112.7	1.78	8.8	10.3	112.9	1.44
Missing	11.0	0.0	95.7	6.58	11.8	0.0	93.0	1.26	14.5	0.0	94.6	1.51
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
None-11- 50	-7.2	2.26	**-13.5**	**-0.9**	-9.9	2.18	**-16.0**	**-3.8**	-8.6	2.16	**-14.7**	**-2.5**
1-10 - 11-50	-3.9	1.36	**-7.7**	**-0.1**	-5.3	1.69	**-10.0**	**-0.6**	-5.2	1.19	**-8.5**	**-1.9**
51-100 - 11-50	1.4	1.45	-2.7	5.5	3.6	1.80	-1.5	8.7	4.5	0.96	**1.8**	**7.2**
101-250 -11- 50	6.9	1.53	**2.6**	**11.2**	8.5	1.64	**3.9**	**13.1**	7.7	1.25	**4.2**	**11.2**
>250 - 11-50	10.5	1.63	**6.0**	**15.0**	13.1	2.07	**7.3**	**18.9**	14.2	1.59	**9.7**	**18.7**
Missing-11-50	-4.5	6.64	-22.6	13.6	-6.6	1.65	**-11.2**	**-2.0**	-4.1	1.66	-8.7	0.5

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Family Reading Habits

Parents were asked to indicate whether anyone in their home used a public library. Library usage ranged from 65% of homes in First class to 73% in Sixth class (Table 6.29). At each grade level, those from households where someone used a public library perform significantly better than those from homes where no-one used a public library, while, at Third class, those from households where nobody used a public library perform better than pupils for whom no data are available.

Table 6.29: Public library usage and mean reading achievement scores, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Yes	57.8	64.9	102.0	0.79	61.7	69.7	102.5	1.09	63.0	73.4	102.3	0.78
No	31.3	35.1	98.9	0.96	26.8	30.3	97.5	1.27	22.8	26.6	96.9	0.87
Missing	10.9	0.0	104.9	6.30	11.5	0.0	92.6	1.28	14.3	0.0	94.9	1.47
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Yes-No	3.1	1.24	**0.2**	**6.0**	5.0	1.67	**1.1**	**8.9**	5.4	1.17	**2.7**	**8.1**
Missing-no	6.0	6.37	-8.9	20.9	-4.9	1.80	**-9.1**	**-0.7**	-2.0	1.71	-6.0	2.0

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Between 64% to 68% of parents read a newspaper every day (Table 6.30). Smaller proportions read magazines (between 22% and 26%) or books (30% to 34%) every day (Tables 6.31 and 6.32). At each of grade level, pupils whose parents read newspapers every day have higher mean scores than those for whom data are missing. Amongst First and Sixth class pupils, those whose parents read papers daily have higher mean scores than those whose parents hardly ever read newspapers. The frequency with which parents read magazines was largely unrelated to pupil reading achievement. The exception was Sixth class pupils whose parents read magazines on a daily basis: these achieve lower mean scores than those whose parents hardly ever read magazines. In contrast, pupil reading achievement varied considerably with the frequency with which parents read books. At each grade level, pupils whose parents read books daily achieve higher scores than

those whose parents hardly ever read books, or for whom data are missing. At Sixth class level, those whose parents are daily book readers achieve higher scores than those who read books a few times a week.

Table 6.30: Frequency of parents reading newspapers and mean achievement, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Every day	53.8	63.6	101.1	0.79	57.4	67.5	101.4	1.06	56.2	67.6	100.9	0.74
Few times a week	21.3	25.2	102.7	1.07	19.9	23.4	100.8	1.34	18.8	22.6	102.8	0.98
Few times a month	5.7	6.8	101.1	1.41	4.1	4.8	102.2	1.71	4.6	5.6	101.8	1.57
Hardly ever	3.7	4.4	93.52	1.93	3.6	4.2	97.1	2.16	3.4	4.1	93.7	1.84
Missing	15.4	0.0	96.6	1.44	15.0	0.0	93.9	1.16	16.9	0.0	94.7	1.24
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Few wk- Every day	1.6	1.33	-1.9	5.1	-0.6	1.71	-5.1	3.9	1.9	1.23	-1.3	5.1
Few mth- Every day	0.0	1.62	-4.3	4.3	0.8	2.01	-4.5	6.1	0.9	1.74	-3.7	5.5
Hardly- Every day	-7.6	2.09	**-13.1**	**-2.1**	-4.3	2.41	-10.6	2.0	-7.2	1.98	**-12.4**	**-2.0**
Missing- Every day	-4.5	1.64	**-8.8**	**-0.2**	-7.5	1.57	**-11.6**	**-3.4**	-6.2	1.44	**-10.0**	**-2.4**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 6.31: Frequency of parents reading magazines and mean achievement, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Every day	17.5	21.9	101.1	1.10	19.6	25.4	99.9	1.29	19.5	25.7	99.2	1.21
Few times a week	31.3	39.2	101.1	0.80	30.4	39.5	101.3	1.14	29.5	39.0	101.1	0.70
Few times a month	23.5	29.5	102.1	1.07	19.7	25.6	102.6	1.19	19.6	25.9	102.8	0.84
Hardly ever	7.4	9.3	100.9	1.27	7.2	9.4	101.2	2.00	7.1	9.3	104.6	1.57
Missing	20.3	0.0	97.7	1.20	23.0	0.0	95.8	1.24	24.3	0.0	95.8	1.20
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Few wk- Every day	0.0	1.36	-3.6	3.6	1.4	1.72	-3.1	5.9	1.9	1.40	-1.8	5.6
Few mth- Every day	1.0	1.53	-3.0	5.0	2.7	1.76	-1.9	7.3	3.6	1.47	-0.3	7.5
Hardly- Every day	-0.2	1.68	-4.6	4.2	1.3	2.38	-5.0	7.6	5.4	1.98	**0.2**	**10.6**
Missing- Every day	-3.4	1.63	-7.7	0.9	-4.1	1.79	-8.8	0.6	-3.4	1.70	-7.9	1.1

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 6.32: Frequency of parents reading books and mean achievement, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Every day	23.8	29.5	103.2	0.97	25.4	32.4	104.5	1.50	26.3	34.0	104.6	1.07
Few times a week	14.1	17.4	101.6	1.13	13.5	17.2	100.3	1.15	15.6	20.2	99.7	0.93
Few times month	24.5	30.3	100.9	1.01	23.2	29.5	101.1	1.20	21.6	28.0	101.4	0.86
Hardly ever	18.4	22.8	99.1	0.99	16.4	20.9	98.6	1.23	13.8	17.9	99.3	0.74
Missing	19.2	0.0	97.73	1.04	21.6	0.0	94.4	1.12	22.7	0.0	94.0	1.05
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Few wk- Every day	-1.6	1.49	-5.5	2.3	-4.2	1.89	-9.2	0.8	-4.9	1.42	**-8.6**	**-1.2**
Few mth- Every day	-2.3	1.40	-6.0	1.4	-3.4	1.92	-8.5	1.7	-3.2	1.37	-6.8	0.4
Hardly- Every day	-4.1	1.39	**-7.7**	**-0.5**	-5.9	1.94	**-11.0**	**-0.8**	-5.3	1.30	**-8.7**	**-1.9**
Missing- Every day	-5.5	1.42	**-9.2**	**-1.7**	-10.1	1.87	**-15.0**	**-5.2**	-10.6	1.49	**-14.6**	**-6.6**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Parental Expectations for Attainment

Parents of Third and Sixth class pupils were asked to indicate when they think their child will finish full-time education. As with the pupils' own expectations, college attendance was the most common expectation, with 45% of Third class parents and 47% of Sixth class parents expecting that their child would attend college (Table 6.33). For both grade levels, pupils expected to finish schooling after the Leaving Certificate perform significantly better than those expected to leave after the Junior Certificate, but poorer than those expected to complete a Post-Leaving Certificate course, or a college diploma or degree.

Table 6.33: Parents' expectations for their child's educational attainment, and mean reading achievement scores, Third and Sixth class

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Before Junior Cert	0.6	0.7	87.7	3.39	0.4	0.5	94.1	9.12
After Junior Cert	3.6	4.2	88.8	1.93	4.1	4.9	86.3	1.04
After Leaving Cert	33.6	39.0	95.5	0.97	31.3	37.2	94.8	0.60
After PLC	9.3	10.8	101.3	1.04	9.2	10.9	99.9	1.23
After college	39.1	45.3	107.2	1.03	39.2	46.5	107.9	0.77
Missing	13.8	0.0	93.1	1.25	15.8	0.0	94.5	1.34
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
Before JC-After LC	-7.8	3.53	-17.4	1.8	-0.7	9.14	-25.6	24.2
After JC-After LC	-6.7	2.16	**-12.6**	**-0.8**	-8.5	1.20	**-11.8**	**-5.2**
After PLC-After LC	5.8	1.42	**1.9**	**9.7**	5.1	1.37	**1.4**	**8.8**
After Coll- After LC	11.7	1.42	**7.8**	**15.6**	13.1	0.98	**10.4**	**15.8**
Missing-After LC	-2.4	1.58	-6.7	1.9	-0.3	1.47	-4.3	3.7

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Selection of a Post-Primary School

When asked if they had decided on a post-primary school for their child, two-thirds of parents of Third Class, and 99% of parents of Sixth Class pupils indicated that they had (Table 6.34). At both grade levels, those for whom data on the item are missing perform significantly poorer than pupils whose parents have decided on a post-primary school.

Table 6.34: Whether parents have decided on a post-primary school for their child, and mean reading achievement scores, Third and Sixth class

	3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE
Yes	58.2	66.5	102.2	1.11	83.9	98.6	101.1	0.67
No	29.4	33.5	98.7	1.31	1.2	1.4	93.0	4.38
Missing	12.4	0.0	93.0	1.19	14.9	0.0	94.6	1.42
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI	
No-Yes	-3.5	1.72	-7.5	0.5	-8.1	4.43	-18.5	2.3
Missing-Yes	-9.2	1.63	**-13.0**	**-5.4**	-6.5	1.57	**-10.2**	**-2.8**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

7. Classroom Environment

This chapter is divided into nine main sections. The first section provides some background detail about teachers whose pupils participated in the Literacy Survey, including gender, teaching experience and qualifications. This is followed by sections describing classroom composition (multigrade and single-grade, and class size), the extent of teacher participation in in-career development, and parent-teacher interaction. The fifth section examines the teaching practices used during English lessons, and is followed by a section on pupil assessment practices. The seventh section outlines homework practices, while the eighth examines some attitudinal variables relating to school 'climate'. Finally, some classroom environment variables are linked to pupil achievement.

Of the 336 teachers whose classes were selected for inclusion in the survey, 312 (92.9%) returned completed Teacher Questionnaires. Teachers' responses were linked to their pupils, meaning that the responses of the 312 teachers are related to 6,499 pupils who completed the DSRT. As a result, the data presented in this chapter are weighted population estimates of pupils whose teachers provided various responses. All data are presented with jackknifed standard errors (see Chapter 3 for an explanation of the techniques used to produce standard errors).

As pupils at three different grade levels were surveyed, teacher variables are reported separately for each of these grade levels. There are two reasons for this. Firstly, it is reasonable to expect that variables such as teaching practices would vary by grade level. Thus, reporting all grade levels together would present a mixture of practices, without offering a clear description of what is typical at a given grade level. Secondly, because of the methods used to draw the sample, separate weights have been calculated for each grade level.

Teachers' Backgrounds

At each of the three grade levels a majority of pupils was taught by female teachers, (ranging from 87% of First class to 65% of Sixth class pupils) and more boys than girls were taught by male teachers (Table 7.1). The latter difference was most apparent in Sixth class, where half of boys were taught by a male teacher, compared to 20% of girls.

Table 7.1: Percentages (SE) of pupils, by gender, taught by male or female teachers

Grade	Gender (SE)	Female Teachers	Male Teachers
1st class (N=2200)	Girls	91.0 (5.09)	9.0 (5.09)
	Boys	83.8 (5.73)	16.2 (5.73)
	All	87.3 (5.08)	12.6 (5.08)
3rd class (N=2120)	Girls	85.5 (3.94)	14.5 (3.94)
	Boys	71.6 (7.28)	28.5 (7.28)
	All	78.2 (4.95)	21.8 (4.95)
6th class (N=2140)	Girls	79.6 (5.02)	20.4 (5.02)
	Boys	49.4 (6.89)	50.6 (6.89)
	All	64.7 (5.05)	35.3 (5.05)

One-quarter (SE=5.10) of First class pupils were taught by teachers employed on a temporary or substitute basis, compared to 15% (SE=3.33) of Third class and 7% (SE=2.98) of Sixth class pupils. Smaller proportions were taught by teachers employed on a part-time or job share basis (5% (SE=2.42) of First class pupils, 2% (SE=1.53) of Third class pupils and none in Sixth class).

Across grade levels, the average number of years teaching experience ranged from less than one year[1] to 40 years. First class pupils' teachers averaged 11 years teaching experience, compared to 10 years and 14 years for Third and Sixth classes, respectively (Table 7.2). Female teachers of First and Third class averaged considerably more years teaching experience than their male counterparts, whereas amongst Sixth class teachers, males averaged more experience than females.

Table 7.2: Mean (SE) years teaching experience, by teacher gender

Grade level	Female teachers	Male teachers	Total
1st class (N=2097)	12.2 (1.27)	5.5 (2.61)	11.3 (1.30)
3rd class (N=1806)	14.0 (3.49)	9.7 (1.44)	10.5 (1.44)
6th class (N=1925)	13.4 (1.73)	16.4 (2.14)	14.5 (1.52)

Between 55% to 57% of pupils at each of the three grade levels were taught by teachers with a Bachelor in Education degree (Table 7.3). The next most common qualification was a degree other than a B. Ed., with 21% of First class pupils, 33% of Third class and 23% of Sixth class pupils being taught by teachers with such a qualification. Between 19% and 25% of pupils, depending on grade level, were taught by teachers with a Diploma for National Teaching, while the proportions with a Graduate Diploma in Education ranged from 14% in Sixth class to 25% in Third class. Five percent of First class pupils were taught by teachers who indicated that they did not hold any of the qualifications listed, compared to 2% of Third and 1% of Sixth class pupils. If those with a non-B.Ed. degree and no Graduate Diploma are included with those with no qualification, the proportion of pupils taught by unqualified teachers ranges from 13% in First class to 8% in Sixth.

Table 7.3: Percentages (SE) of pupils taught by teachers with various qualifications

Teacher's Qualification	Percent (SE) of pupils whose teachers hold qualification		
	1st class (N=2131)	3rd class (N=1863)	6th class (N=1978)
Diploma for National Teaching (NT)	22.7 (4.79)	19.0 (4.68)	25.0 (5.45)
B.Ed.	57.5 (4.91)	54.6 (4.63)	57.0 (5.41)
Degree other than B.Ed.	20.6 (3.97)	32.7 (4.72)	23.4 (4.08)
Graduate Diploma in Education	14.9 (2.06)	25.3 (4.74)	13.7 (3.95)
None of the above	4.9 (2.04)	1.7 (1.23)	0.9 (0.92)
No teaching qualification	12.9 (3.13)	8.6 (3.16)	8.0 (3.17)

As some teachers held multiple qualifications, column percentages sum to more than 100%.

As shown in Table 7.4, the most common additional qualification found among the sample of teachers surveyed was a Higher Diploma in Education (H. Dip. Ed.).

Table 7.4: Percentages (SE) of pupils taught by teachers with various additional qualifications

Additional Qualification	Percent (SE) of pupils whose teachers held qualification		
	1st class (N=2131)	3rd class (N=1863)	6th class (N=1978)
Higher Diploma in Education (H. Dip. Ed.)	12.8 (3.48)	11.4 (3.43)	19.5 (2.92)
Diploma in Remedial / Special Education	4.9 (2.80)	4.9 (2.04)	2.3 (1.62)
M.A. (Education)	2.6 (1.52)	2.7 (1.62)	6.3 (2.75)
M.A. (Other)	0.4 (0.43)	4.4 (2.27)	2.3 (1.65)
Other qualification	7.8 (1.54)	9.1 (3.53)	5.4 (2.18)
Any additional qualification	27.8 (4.50)	31.7 (5.99)	33.5 (4.56)

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[1] Responses of those who reported that they had less than one year teaching experience were rounded up to indicate that they had taught for one year.

Almost one in four Sixth class pupils were taught by teachers with a H. Dip. Ed., as were 13% of First class and 11% of Third class pupils. Less than 5% of pupils at any grade level were taught by teachers with a Diploma in Remedial or Special Education, with similarly low proportions taught by teachers with a Masters degree in Education or a Masters in another subject area. Between 5% (Sixth class) and 9% (Third class) of pupils were taught by teachers with other qualifications, including a Postgraduate Certificate in Education, a Diploma in Childcare/Language/Dyslexia, and a qualification in Montessori methods. Overall, 28% of First class pupils were taught by a teacher with at least one additional qualification, as were 32% of Third and 33% of Sixth class pupils.

Classroom Composition

A large majority of pupils at each of the three grade levels was taught in single-grade classes (Table 7.5). Of those for whom such data were available, 11% of First class pupils were taught in multigrade classes, as were 15% of Third class and 4% of Sixth class pupils.

Table 7.5: Percentage (SE) of pupils taught in single-grade or multigrade classes

Class Type	% 1st class		% 3rd class		% 6th class	
	All (N=2200)	Valid (N=2131)	All (N=2120)	Valid (N=1834)	All (N=2140)	Valid (N=1952)
Single-grade	86.2 (2.97)	88.9 (2.80)	73.5 (4.57)	84.9 (4.51)	87.5 (3.26)	96.0 (1.86)
Multigrade	10.7 (2.74)	11.1 (2.80)	13.1 (3.97)	15.1 (4.51)	3.7 (1.72)	4.0 (1.86)
Missing	3.1 (1.74)	0.0	13.5 (3.17)	0.0	8.8 (3.25)	0.0

The average number of pupils in a classroom varied across grade level (Table 7.6). First class pupils had an average of 21.4 pupils[2] in their classroom, compared to 24.2 in Third class and 23.9 in Sixth class. In First and Third class, multigrade classrooms had marginally fewer pupils than single grade classrooms, whereas in Sixth class, the number of pupils in the average single grade classroom (24.2) was much larger than the number in the average multigrade classroom (17.4).

Table 7.6: Mean (SE) number of pupils, by class type

Class Type	1st (N=2131)	3rd (N=1834)	6th (N=1952)
Single-grade	21.6 (0.55)	24.4 (0.63)	24.2 (0.52)
Multigrade	20.1 (1.15)	23.4 (2.32)	17.4 (1.92)
All	21.4 (0.51)	24.2 (0.59)	23.9 (0.49)

In-Career Development

Just over one-third of pupils were taught by teachers who had attended *any* in-career development (ICD) days related to English in the school year during which the survey was conducted (Table 7.7). The commonest location for ICD (25% – 27% of pupils' teachers) was in the school, during school hours. Smaller percentages attended ICD at a venue outside the school, but during school hours. Teachers of less than 3% of pupils at any grade level had attended ICD outside of school hours.

Teachers were presented with a list of 12 potential topics for ICD and asked to indicate, in rank order, the three topics they would most like to see addressed. Table 7.8 presents the five topics most frequently selected by teachers. Identifying reading difficulties, and dealing with reading difficulties were by far the most frequently chosen topics, with the latter selected by over 70% of pupils' teachers in First and Third class.

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[2] A small number of sampled schools were participating in the Breaking the Cycle scheme. As part of the scheme, Junior classes have a maximum pupil:teacher ratio of 15:1. If data are analysed separately for Breaking the Cycle and non-Breaking the Cycle schools, the average number of pupils in a First class classroom is 14.3 pupils and 22.0, respectively.

Table 7.7: Percentages (SE) of pupils' teachers who had attended ICD related to English during the school year

Teachers attended ICD …	1st		3rd		6th	
	% (SE)	N	% (SE)	N	% (SE)	N
In school, during school hours	27.0 (5.06)	2041	23.7 (4.94)	1804	24.6 (4.52)	1833
Outside school, during school hours	14.0 (4.16)	1985	10 (3.61)	1802	15.2 (4.14)	1833
Outside school hours	3.1 (1.55)	1996	2.1 (1.49)	1741	1.2 (1.22)	1833
Total *any* ICD	38.1 (6.67)	1985	34.4 (5.44)	1721	33.7 (5.47)	1833

At each grade level a minimum of 40% of pupils' teachers listed the identification of reading difficulties among their three priority topics for ICD, with a greater proportion of First class teachers selecting it as one of their three priority topics. Spelling development was an ICD topic cited by teachers of one-quarter of First and Sixth class pupils and by 41% of teachers of Third class pupils. Phonemic awareness and oral language were two further topics selected by the teachers of a large number of pupils at each of the grade levels.

Table 7.8: Percentages (SE) of pupils whose teachers listed various topics that they would like addressed in ICD

		Deal w/ reading difficulties	Identify reading difficulties	Spelling development	Phonemic awareness	Oral language
1st class	1st topic (N=2030)	27.0 (4.17)	27.1 (4.52)	5.3 (2.17)	12.1 (3.53)	9.2 (3.33)
	2nd topic (N=2017)	32.3 (4.89)	17.1 (3.82)	11.5 (3.62)	6.8 (2.67)	4.6 (1.91)
	3rd topic (N=2017)	12.7 (3.63)	12.1 (3.17)	10.0 (3.45)	12.3 (3.59)	2.9 (1.49)
	Total (N=2017)	*72.3 (5.76)*	*55.8 (4.76)*	*26.8 (5.03)*	*31.3 (5.36)*	*16.8 (4.18)*
3rd class	1st topic (N=1715)	24.8 (5.07)	25.0 (4.45)	10.6 (4.18)	8.3 (3.08)	8.0 (3.34)
	2nd topic (N=1715)	27.3 (5.61)	12.7 (4.20)	15.8 (4.37)	4.9 (2.42)	4.0 (2.43)
	3rd topic (N=1714)	20.0 (4.55)	2.2 (1.50)	13.7 (3.55)	10.0 (3.50)	7.1 (3.17)
	Total (N=1696)	*71.9 (5.57)*	*40.3 (4.88)*	*40.6 (5.28)*	*23.5 (4.98)*	*18.2 (3.89)*
6th class	1st topic (N=1909)	16.3 (4.53)	22.5 (4.53)	5.6 (2.54)	10.0 (3.81)	13.3 (4.11)
	2nd topic (N=1909)	26.3 (4.85)	10.3 (3.54)	11.7 (3.41)	4.4 (2.33)	9.2 (3.22)
	3rd topic (N=1873)	12.3 (3.55)	7.9 (2.85)	7.6 (2.64)	9.9 (2.82)	8.1 (2.82)
	Total (N=1873)	*55.7 (6.05)*	*41.3 (4.85)*	*24.1 (4.65)*	*24.6 (4.35)*	*31.0 (4.91)*

Table 7.9 shows how teachers who had previously experienced ICD on a topic rated its usefulness. As can be seen, many had already received ICD on the five topics shown in Table 7.8. For example, over a third of pupils' teachers at each grade level had already attended ICD dealing with reading difficulties, including up to half of those who wanted further ICD on the topic. However, satisfaction with previous ICD on dealing with reading difficulties was not high. A minority rated previous ICD on this topic as very useful, with a majority rating it as some use or not much use. Similarly, although teachers of a large minority of pupils had attended ICD centred on

the identification of reading difficulties, up to half described it as being of not much use. Ratings of ICD related to spelling development were slightly better, particularly among First class teachers. Finally, ratings for ICD related to phonemic awareness and to oral language were generally positive, with teachers of at least 80% of pupils at each grade level reporting that they found ICD in these areas to be of some use or very useful.

Table 7.9: Teacher ratings of the usefulness of ICD on various topics

		Very useful	Some use	Not much use
Dealing with reading difficulties	1st class (N=793)	13.9 (6.12)	40.3 (6.33)	45.8 (8.98)
	3rd class (N=674)	5.1 (3.51)	56.0 (8.83)	38.9 (8.65)
	6th class (N=956)	27.0 (6.58)	38.3 (7.33)	34.7 (5.74)
Identifying reading difficulties	1st class (N=788)	13.6 (5.92)	53.2 (7.72)	33.2 (8.72)
	3rd class (N=691)	7.7 (4.65)	36.7 (9.73)	55.6 (8.57)
	6th class (N=952)	13.2 (5.20)	48.6 (6.22)	38.2 (6.27)
Spelling Development	1st class (N=916)	7.2 (3.60)	77.5 (6.44)	15.3 (4.81)
	3rd class (N=705)	7.3 (4.19)	56.4 (9.46)	36.3 (8.54)
	6th class (N=963)	13.5 (5.64)	49.4 (9.10)	37.1 (8.05)
Phonemic Awareness	1st class (N=965)	26.2 (6.43)	59.7 (6.48)	14.1 (5.32)
	3rd class (N=719)	16.3 (7.04)	62.8 (7.65)	20.9 (7.87)
	6th class (N=1004)	18.1 (5.68)	64.5 (7.65)	17.5 (4.69)
Oral Language	1st class (N=927)	26.6 (8.28)	68.2 (7.90)	5.3 (3.02)
	3rd class (N=830)	15.7 (6.73)	68.0 (8.88)	16.2 (7.08)
	6th class (N=1084)	28.1 (5.80)	63.7 (5.82)	8.2 (3.82)

Parental Involvement

As an indication of the extent of parent-teacher interaction, teachers were asked how many pupils' parents they meet in a typical week. While 39% of First class pupils' parents met their child's teacher, only 17% in Third class and 14% in Sixth class did so. Parental contact ranged from 0% to 100% of parents for First class teachers, while, in contrast, no Sixth class teacher reported meeting more than 50% of their pupils' parents in a typical week.

The teachers of 79% of First class and 78% of Third class pupils either agreed or strongly agreed with a statement saying that their school tried to involve parents as much as possible in school life (Table 7.10). The proportion of Sixth class pupils whose teachers believed this to be the case was slightly lower (69%), with teachers of 14% of Sixth class pupils strongly disagreeing or disagreeing.

Table 7.10: Percentages (SE) of pupils' teachers expressing various levels of agreement about the extent of home-school interaction

	'We try to involve parents as much as possible in school life'				
	Strongly agree	Agree	Unsure	Disagree	Strongly disagree
1st class (N=2101)	22.7 (4.38)	56.4 (4.69)	12.8 (3.48)	7.0 (2.12)	1.1 (1.04)
3rd class (N=1863)	20.2 (4.93)	57.5 (5.64)	13.1 (4.00)	9.2 (3.02)	0.0
6th class (N=1959)	21.7 (4.88)	47.6 (5.73)	16.8 (4.07)	10.4 (3.14)	3.5 (2.21)

Teachers who agreed with the statement reported meeting a higher percentage of parents than did teachers who disagreed (Table 7.11). For example, among First class teachers who agreed that their school tried to involve parents, the average percentage of parents met in a typical week was 42%. In contrast, among those who strongly disagreed that the school tried to involve parents, the average percentage of parents met was just under 10%.

Table 7.11: Percentages (SE) of pupils' parents met by teachers in a typical week, by teachers' perceptions of parental involvement

	Strongly agree	Agree	Unsure	Disagree	Strongly disagree
1st class (N=2050)	39.4 (5.01)	41.6 (4.80)	36.4 (4.70)	20.4 (7.31)	9.5 (-)
3rd class (N=1815)	16.5 (2.76)	18.1 (1.62)	15.3 (3.14)	11.0 (3.47)	0.0
6th class (N=1863)	23.4 (2.67)	12.6 (1.84)	8.1 (2.54)	10.9 (2.79)	10.7 (9.88)

English Lesson Activities

In order to gauge the range of activities taking place during reading lessons, teachers were presented with a list of 11 activities and asked to indicate which, if any, of the activities they had used in the last full reading lesson they gave (Table 7.12). Unsurprisingly, the frequency with which activities were used varied by grade level, with larger proportions of First class pupils learning letter sounds / names, working with flashcards or 'big books', and doing phonics exercises. While 59% of First class pupils had been taught letter sounds / names in their last lesson, this was true of only 35% of Third class and 10% of Sixth class pupils. Similarly, although 56% of First class pupils had been taught with flashcards, only 22% of Third class and 8% of Sixth class pupils had. 'Big books' had not been used in any Sixth class lessons, and with only 2% of Third class pupils, but with 15% of those in First class. A majority of First (76%) and Third class pupils (59%) had engaged in phonics exercises in their last reading lesson, but only 25% of those in Sixth class had done so.

Activities such as the teacher listening to pupils read aloud, and reading aloud to the class, were used in a large majority of cases, across all grade levels. Reading scheme books were also widely used, ranging from 58% of Sixth class to 70% of First class pupils. Sequencing activities were less widely used, although with similar frequency across grade levels (ranging from 21% of First class to 27% of Third class pupils).

Comprehension exercises were used with over 80% of Third and Sixth class pupils but with only 55% of those in First class. Finally, the teachers of a small minority reported that they had involved adults in reading to pupils in their last reading lesson, ranging from 9% of First class to only 3% of Sixth class pupils. Between 7% and 13% of pupils' teachers reported a number of other (unlisted) activities used during their last reading lesson. These included word location games, word matching, grammar and dictionary work, silent reading and use of computer programmes.

Table 7.12: Percentages (SE) of pupils for whom teachers had used various activities in their last reading lesson

	1st (N=2131)		3rd (N=1863)		6th (N=1978)	
	% Yes	SE	% Yes	SE	% Yes	SE
Taught letter sounds / names	58.7	3.73	33.8	4.87	10.5	3.46
Used cloze activities	35.9	4.43	36.1	5.73	38.1	5.49
Used flashcards to teach words	56.1	4.51	21.9	4.96	7.7	2.97
Used sequencing activities	21.0	4.25	26.6	4.57	24.9	4.48
Read to the class	71.6	5.05	85.7	3.54	80.6	4.18
Used comprehension exercises	55.0	4.54	81.8	3.49	84.0	4.13
Used a 'big book' with a group	14.8	3.63	1.8	1.24	0.0	-
Other adults reading with children	9.2	3.08	8.5	3.27	2.7	1.61
Listened to children reading aloud	94.1	2.31	96.8	1.88	89.0	3.34
Used reading scheme books	70.4	5.71	64.5	5.85	57.5	5.44
Used phonics exercises	76.0	4.10	59.4	5.43	24.5	4.97
Other	6.8	1.98	7.9	2.84	12.8	3.70

Teachers indicated that adult volunteers assisted in literacy-related activities in a minority of classrooms. They were most likely to assist in First class, with 38% of pupils in classes where adult

volunteers provided help, compared to 27% in Third and 19% in Sixth class (Table 7.13). At each grade level, the activities for which adult volunteers were most used were paired or shared reading, followed by listening to children read aloud, and helping children with their writing.

Table 7.13: Percentages (SE) of pupils whose teachers indicated that adult volunteers were used and the activities in which they were engaged

	1st (N=2116)		3rd (N=1863)		6th (N=1978)	
	%	SE	%	SE	%	SE
Adult volunteers used	38.4	5.36	27.3	5.07	18.5	4.85
Engaging in paired/shared reading	27.1	4.62	20.6	5.34	13.6	4.14
Listening to children reading aloud	23.7	4.16	15.3	3.78	10.8	3.78
Helping children with their writing	13.3	3.41	14.3	3.74	9.8	3.51
Teaching word identification skills	6.6	2.33	13.0	4.38	4.8	2.60
Reading aloud to small groups	4.3	1.78	6.9	3.31	2.8	2.13
Reading from a 'big book'	5.4	2.53	0.9	0.96	0	0

Time Allocated to English Lessons

Teachers spent approximately one hour per day teaching English (ranging from 58 minutes in Third class to 66 minutes in First class) (Table 7.14). Of that time, between 35% (in Sixth class) and 40% (First class) was spent teaching reading. The average number of minutes per day spent teaching reading was 27 minutes in First class, 24 minutes in Third class and 21 minutes in Sixth class. There was considerable variation within grade levels in the amount of time spent teaching reading, with one Sixth class reportedly receiving no reading instruction.

Table 7.14: Mean (SE) time spent per day teaching English, percentage of time spent teaching reading, and mean daily minutes spent teaching reading

	Minutes teaching English			% time teaching reading			Minutes teaching reading		
	Mean	N	Range	Mean	N	Range	Mean	N	Range
1st	65.5 (2.15)	2062	30 – 180	40.1 (1.28)	2053	9 – 80	27.1 (1.39)	2053	4 - 144
3rd	57.9 (2.21)	1826	35 – 180	39.9 (1.97)	1792	5 – 80	23.6 (1.74)	1774	3 - 126
6th	59.4 (4.11)	1964	30 – 300	34.7 (2.07)	1873	0 – 75	20.8 (1.79)	1873	0 - 105

The amount of time *allocated* to and *spent teaching* an English lesson may vary considerably. Teachers' responses indicate that, in the last English lesson they taught, an average of 21% to 26% of time was spent on classroom management, with only 74% to 79% of time spent on instruction (Table 7.15). There was considerable variation between teachers on the amount of time spent on each, with over 5% of Third and Sixth class pupils and over 10% of First class pupils being taught in classes where at least half of the last English lesson was spent on classroom management.

Table 7.15: Percentage (SE) of time spent on management and on instruction in the last English lesson taught

	% Management		% Instruction	
	Mean	Range	Mean	Range
1st (N=2131)	25.6 (2.28)	5 – 80	74.4 (2.28)	20 - 95
3rd (N=1807)	22.9 (2.00)	1 – 90	77.1 (2.00)	10 - 99
6th (N=1959)	21.0 (1.55)	3 – 80	79.0 (1.55)	20 - 97

Assuming that the last English lesson taught is a reasonable proxy for an average lesson, the percentage of time spent on instruction can be linked to the average number of minutes spent teaching reading to show the average daily *instruction time* for reading. Thus, the average First class pupil receives 20 minutes reading instruction a day, compared to 18 minutes in Third and 16 minutes in Sixth class (Table 7.16).

Table 7.16: Mean (SE) minutes per day spent on actual instruction in English reading

	Minutes reading instruction	
	Mean	Range
1st (N=2053)	19.6 (0.90)	3 - 59
3rd (N=1718)	17.9 (1.48)	2 - 113
6th (N=1854)	16.1 (1.42)	0 - 95

Teachers were given a list of seven activities and asked to select up to two that they would do if given more time to teach English. However, between 11% and 24% (depending on grade level) selected more than two activities, with some selecting up to five. These cases are excluded from the data presented in Table 7.17. Of the remainder, almost two-thirds of pupils' teachers at each of the grade levels indicated that they would spend extra time developing pupils' oral language skills. Approximately a quarter of pupils' teachers at each of the grade levels would devote extra time to teaching writing, while the teachers of 10-13% would use the time to teach grammar.

Table 7.17: Percentages (SE) of pupils' teachers indicating the two ways in which they were likely to use any extra English teaching time

	1st (N=1843)		3rd (N=1407)		6th (N=1646)	
	% Yes	SE	% Yes	SE	% Yes	SE
Developing pupils' oral language	65.6	5.52	60.6	6.33	65.7	5.61
Teaching word identification skills	45.3	5.63	40.1	6.71	21.4	4.76
Teaching writing	23.2	5.23	21.5	4.97	27.2	5.27
Assessing pupils	18.6	4.44	7.7	3.56	9.8	3.00
Reading aloud to pupils	17.2	3.51	19.6	5.74	13.2	4.23
Pupils reading literature / novels	12.8	3.57	28.1	6.13	45.3	4.91
Teaching grammar	10.4	3.39	12.2	4.67	9.9	3.78

The proportion of pupils whose teachers would use extra time to read aloud to pupils was also similar across grade levels, ranging from 13% in Sixth class to 18% in Third. Slightly less than half (45%) of First class pupils' teachers indicated that they would spend extra time teaching word identification skills, compared to 40% in Third and 21% in Sixth class. A greater proportion of First class pupils' teachers also wanted more time to assess pupils (19% versus 8% and 10% for Third and Sixth, respectively). Finally, while 13% of First class pupils' teachers would spend extra time allowing them to read literature or novels, this was true of 45% of Sixth class pupils.

English Lessons: Methods and Planning

Teachers were asked to place themselves along a 5-point scale, in terms of the flexibility of their approach to teaching reading. No Third or Sixth class pupils were taught by teachers who indicated that they always adhered to a specific methodology, while 6% - 9% were taught by teachers who adhered to a methodology *most* of the time (Table 7.18). A larger proportion of First class pupils were taught by teachers who tended to adhere to a particular methodology. Proportionally fewer First class (10%) than Third (14%) and Sixth class (18%) pupils were taught by teachers who described themselves as usually varying their teaching methodologies to match pupil needs.

Table 7.18: Percentages (SE) of pupils whose teachers reported using a rigid or a flexible use of teaching methodology when teaching English reading

	1 Adhere to specific methodology	2	3	4	5 Vary methods for pupil needs
1st (N=2118)	1.3 (0.94)	10.9 (2.52)	40.0 (4.55)	37.8 (4.67)	10.0 (2.44)
3rd (N=1863)	0.0	8.7 (3.24)	38.5 (5.74)	39.2 (5.86)	13.6 (3.86)
6th (N=1978)	0.0	5.5 (2.45)	33.6 (5.38)	42.5 (5.61)	18.5 (4.73)

A large majority of pupils at each of the three grade levels had teachers who, at the beginning of an English lesson, sometimes or always outlined what they hoped to teach (Table 7.19). However, there were some differences in practice by grade level. Whereas less than 5% of Sixth class pupils were never or rarely told the purpose of a lesson at the start, this was true of 20% of Third class pupils.

Almost all pupils' (94-98%) teachers also indicated that they sometimes or always asked questions at the start of a lesson to establish what their pupils already knew. Finally, *all* Third and Sixth class pupils and 97% of First class pupils were taught by teachers who sometimes or always asked questions at the end of an English lesson to establish what pupils had learned.

Table 7.19: Percentages (SE) of pupils whose teachers reported using various strategies to assess and increase comprehension

		Never	Rarely	Sometimes	Always
Outline purpose	1st (N=2117)	1.9 (1.36)	11.3 (3.70)	72.9 (4.38)	13.9 (3.17)
	3rd (N=1863.)	2.6 (2.11)	17.5 (4.61)	56.4 (3.89)	23.5 (5.31)
	6th (N=1978)	1.8 (1.30)	2.6 (1.54)	76.3 (4.76)	19.3 (4.39)
Establish prior knowledge	1st (N=2117)	0.0	3.0 (1.89)	57.2 (4.49)	39.7 (4.01)
	3rd (N=1847)	2.1 (2.06)	3.8 (2.42)	51.1 (5.63)	43.0 (6.22)
	6th (N=1965)	0.0	1.9 (1.36)	63.8 (4.90)	34.3 (5.02)
Examine comprehension	1st (N=2105)	0.0	3.2 (2.05)	36.6 (5.71)	60.2 (5.63)
	3rd (N=1863)	0.0	0.0	44.9 (5.48)	55.1 (5.48)
	6th (N=1978)	0.0	0.0	50.4 (4.57)	49.6 (4.57)

Teachers were asked to indicate the extent to which a variety of factors influenced the planning of English lessons. As one factor – college lecture notes – might reasonably be expected to have greater influence on newly-qualified teachers, only data for those engaged in their *first year of teaching* are shown in Table 7.20. As can be seen, only a minority made extensive use of their lecture notes. Among First and Third class pupils taught by 'new' teachers, less than a quarter were taught by those who were greatly influenced by their college notes, with 22% of First class pupils' teachers indicating that their notes had no influence on their planning. None of the Sixth class pupils' teachers described themselves as greatly influenced by their lecture notes (although teacher numbers are too small to use this as a reliable estimate).

Table 7.20: Percentages (SE) of newly-qualified teachers indicating the extent to which college lecture notes influenced English lesson plans

	Great	Some	None
1st (N=476)	19.6 (8.63)	58.2 (14.07)	22.1 (9.84)
3rd (N=396)	24.4 (12.33)	61.6 (13.73)	14.0 (8.16)
6th (N=74)	0.0	72.2 (29.84)	27.8 (29.84)

Table 7.21 shows influences on lesson plans for the sample as a whole. Approximately half of pupils' teachers indicated that their own previously planned lessons or pupil textbooks exerted a great influence on them when planning an English lesson. The *Primary School English Curriculum* was cited as a great influence by teachers of 40% of First and Third class pupils but by only 25% of Sixth class pupils' teachers. While between 20% and 26% of pupils' teachers described the School Plan for English as a having a great influence, 20% of Third class pupils' teachers indicated it had no influence on planning an English lesson. Plans compiled by other teachers, and college lecture notes were least likely to be considered when planning English lessons. Approximately half of pupils at each of the three grade levels were taught by teachers who indicated that these two factors had no influence on them when planning lessons.

Table 7.21: Percentages (SE) of pupils' teachers indicating the extent to which various factors influenced English lesson plans

| | | Extent of influence when planning an English lesson | | |
		Great	Some	None
School plan for English	1st (N=2084)	26.0 (5.51)	62.6 (5.68)	11.4 (3.17)
	3rd (N=1815)	24.7 (5.07)	55.6 (6.21)	19.7 (5.07)
	6th (N=1912)	20.0 (4.79)	67.2 (5.78)	12.7 (4.17)
Own previously planned lessons	1st (N=2106)	48.2 (4.99)	49.1 (4.97)	2.7 (1.37)
	3rd (N=1821)	56.8 (5.85)	42.6 (5.96)	0.6 (0.58)
	6th (N=1914)	52.9 (5.60)	45.6 (5.33)	1.5 (1.18)
Plan compiled by other teachers	1st (N=1967)	3.5 (1.64)	47.8 (5.74)	48.6 (6.10)
	3rd (N=1796)	3.3 (1.99)	41.9 (5.53)	53.4 (5.46)
	6th (N=1919)	2.0 (1.37)	46.2 (5.00)	51.8 (5.11)
Teacher's manual / resource book accompanying textbook	1st (N=2116)	30.4 (4.32)	65.6 (4.47)	4.0 (1.81)
	3rd (N=1863)	33.1 (5.45)	58.1 (5.00)	8.8 (2.71)
	6th (N=1931)	23.3 (4.13)	73.8 (4.38)	2.9 (1.67)
Pupil textbooks	1st (N=2118)	42.4 (5.55)	55.1 (5.44)	2.5 (1.46)
	3rd (N=1824)	56.0 (5.53)	41.4 (5.52)	2.6 (1.49)
	6th (N=1873)	53.4 (6.63)	45.7 (6.45)	0.9 (0.86)
Other resource books / textbooks	1st (N=2082)	22.8 (4.76)	73.6 (5.19)	3.6 (1.98)
	3rd (N=1827)	29.2 (4.45)	69.9 (4.47)	0.9 (0.89)
	6th (N=1901)	32.9 (5.53)	65.5 (5.60)	1.6 (1.54)
Primary School English Curriculum	1st (N=2116)	40.4 (4.82)	55.9 (4.42)	3.7 (1.70)
	3rd (N=1824)	39.9 (5.39)	57.3 (5.26)	2.8 (1.66)
	6th (N=1978)	25.2 (5.46)	71.3 (5.65)	3.5 (1.49)
College lecture notes	1st (N=1987)	7.1 (2.66)	35.4 (5.94)	57.5 (6.02)
	3rd (N=1803)	12.4 (4.30)	35.5 (5.49)	52.1 (6.05)
	6th (N=1921)	0.8 (0.82)	40.4 (5.28)	58.7 (5.48)

Grouping Practices

Teachers were asked to indicate the percentage of instruction time for English spent teaching the whole class, small groups or individual pupils[3]. Whole class teaching more commonly used with Sixth class pupils than with First and Third classes (Table 7.22), and as a corollary, Sixth class pupils had the lowest proportion of time (9%, compared to 17% for First class and 14% for Third class) devoted to individual instruction. At each grade level, a majority of instruction time was spent on whole class teaching (ranging from 58% of time for First class pupils to 71% for Sixth class).

Table 7.22: Percentages (SE) of English instruction time spent teaching the whole class, small groups or individual pupils

| | Whole class | | Small group | | Individual | |
	%	Range	%	Range	%	Range
1st (N=2018)	57.8 (1.91)	0 – 100	24.7 (1.80)	0 – 100	17.5 (1.11)	0 – 60
3rd (N=1823)	61.2 (2.70)	0 – 100	24.9 (2.39)	0 – 90	13.9 (1.30)	0 – 50
6th (N=1950)	71.5 (2.45)	14 - 100	19.5 (2.12)	0 – 80	9.0 (0.87)	0 - 30

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[3] The following definitions were offered for those teaching multigrade classes: whole class = all children at the same grade level engaged in the same lesson; small group = groups at the same grade level assigned to different tasks; individual = one child under direct instruction, all others assigned other tasks.

Teachers were asked if the same pupils were placed in the same group whenever they used small group teaching. Almost one-third (30%) of First class pupils were, compared to 24% of Sixth class and only 15% of Third class pupils (Table 7.23).

Table 7.23: Percentages (SE) of pupils who were always, sometimes or never placed in the same group for small group teaching

	Always	Sometimes	Never
1st (N=1800)	30.5 (4.49)	64.1 (4.68)	5.4 (1.24)
3rd (N=1421)	14.5 (4.90)	75.6 (6.22)	9.9 (4.60)
6th (N=1417)	24.5 (5.99)	68.1 (6.30)	7.4 (3.85)

Approximately half of Third and Sixth class pupils were assigned to groups in which similar ability pupils were placed together, as were almost two-thirds of First class pupils (Table 7.24).

Table 7.24: Percentages (SE) of pupils who were placed in similar or mixed ability groups for small group teaching

	Similar ability	Mixed ability
1st (N=1759)	64.7 (6.72)	35.3 (6.72)
3rd (N=1395)	48.0 (7.43)	52.0 (7.43)
6th (N=1345)	55.2 (7.10)	44.8 (7.10)

English Teaching Resources

Teachers of at least 95% of pupils at each of the three grade levels reported that they either always or sometimes used class readers, and workbooks or worksheets during English reading lessons (Table 7.25). Novels or short stories were also widely used at each grade level, particularly by Sixth class pupils. Whereas 99% of Sixth class pupils either sometimes or always used novels or short stories, only 81% of Third class and 65% of First class pupils did so. Newspapers and magazines were used reasonably frequently in Third and Sixth classes, but less than 20% of First class pupils used them on a reasonably regular basis. Finally, the teachers of a very small proportion of pupils (less than 3%) indicated that they always used computer software during English reading lessons. Use was more frequent among First class pupils, with teachers of 57% indicating that software was sometimes used, compared to 40% or less of Third and Sixth class pupils.

Table 7.25: Percentages (SE) of pupils' teachers who used various resources to teach English, by frequency of use

		Always	Sometimes	Rarely	Never
Workbooks / worksheets	1st (N=2131)	40.8 (6.17)	59.2 (6.17)	0.0	0.0
	3rd (N=1863)	21.2 (4.77)	73.8 (5.23)	3.9 (2.39)	1.2 (1.17)
	6th (N=1943)	22.8 (4.84)	75.7 (4.86)	1.5 (1.05)	0.0
Class reader / other reader (e.g., extension series)	1st (N=2131)	79.8 (3.67)	17.8 (3.25)	1.7 (1.21)	0.7 (0.71)
	3rd (N=1863)	61.9 (4.85)	35.4 (4.63)	2.7 (1.52)	0.0
	6th (N=1978)	41.1 (5.92)	55.4 (5.81)	0.9 (0.89)	2.6 (1.90)
Newspapers / magazines	1st (N=2090)	0.0	19.4 (4.53)	40.5 (6.38)	40.1 (4.25)
	3rd (N=1843)	1.9 (1.34)	43.2 (5.41)	44.9 (5.67)	10.0 (3.01)
	6th (N=1978)	6.0 (2.89)	61.3 (5.30)	30.8 (5.75)	1.9 (1.34)
Computer software	1st (N=2115)	2.5 (1.46)	56.9 (5.12)	23.9 (4.55)	16.7 (3.74)
	3rd (N=1791)	1.0 (1.03)	40.1 (5.55)	43.5 (4.95)	15.4 (3.34)
	6th (N=1954)	0.0	37.3 (5.69)	44.0 (5.39)	18.7 (3.93)
Novels / short stories	1st (N=2131)	9.7 (2.79)	54.9 (5.27)	24.3 (4.28)	11.1 (3.63)
	3rd (N=1843)	20.9 (4.25)	60.4 (5.46)	12.7 (3.70)	5.9 (3.39)
	6th (N=1959)	23.5 (4.94)	75.5 (4.82)	0.9 (0.95)	0.0

Teachers were asked to select a maximum of two extra resources (from a list of five) that they most needed to provide more effectively for the literacy needs of their pupils. Between 5-13% of pupils' teachers (depending on grade level) selected more than two extra resources. These are excluded from the analyses shown in Table 7.26. Of the remainder, the proportion of pupils whose teachers felt that additional books for class libraries were required increased with grade level. Whereas 27% of First class pupils' teachers indicated that their pupils needed extra class library books, this was true of 40% of Third class and 43% of Sixth class pupils.

Depending on grade level, between 21% and 28% of pupils' teachers indicated that additional appropriate textbooks were one of the two types of additional resources they most needed, while between 28% to 37% chose extra workbooks or worksheets. Almost half (49%) of First class pupils' teachers indicated a need for more reference materials for teachers, as did teachers of 38% of Sixth class and 39% of Third class pupils. Finally, half of Third class pupils' teachers felt that more software for pupils was needed, as did 44% of First class and 37% of Sixth class pupils' teachers.

Table 7.26: Percentages (SE) of pupils whose teachers selected various resources as one of the two additional resources they most needed to cater for their pupils' literacy needs

		%	SE
Books to create / expand a class library	1st (N=2027)	26.9	4.87
	3rd (N=1621)	39.5	5.75
	6th (N=1716)	42.8	5.62
Appropriate textbooks	1st (N=2027)	21.3	4.59
	3rd (N=1621)	21.5	5.26
	6th (N=1716)	27.9	4.95
Workbooks / worksheets	1st (N=2027)	27.5	4.61
	3rd (N=1621)	28.2	5.50
	6th (N=1716)	36.6	6.18
Reference material for teachers	1st (N=2027)	48.6	4.39
	3rd (N=1621)	39.0	5.86
	6th (N=1716)	38.2	6.46
Software for pupils	1st (N=2027)	44.0	5.71
	3rd (N=1621)	49.7	5.98
	6th (N=1716)	36.9	5.93

Assessing Pupils' Progress

Teacher-made tests were by far the most widely used and frequently used method used of assessing pupils' progress in English reading and writing (Table 7.27). All Third and Sixth class pupils were assessed with a teacher-made test at least once a term, as were almost all First class pupils. Over three-quarters of pupils at each of the three grade levels were tested using a using teacher-made test at least once a week. Assessment using teacher-made checklists was also common. Less than 15% of pupils at any grade level were not assessed at some stage during the school year using such checklists. Over one-quarter (27%) of First class pupils were assessed at least once a week using teacher checklists, as were 11% of Third class and 15% of Sixth class pupils. The third form of assessment that was widely used was standardised tests, with over 90% of pupils being assessed in this manner during the school year. Most (between 83 - 87%, depending on grade level) were tested on an at least yearly basis, with a small proportion being tested once a term.

Seventy percent of First class pupils were assessed using progress tests accompanying reading schemes, as were 52% of Third class and 58% of Sixth class pupils. The use of published checklists to assess progress was less common, ranging from 39% of Sixth class to 68% of First class pupils. Early-screening tests, typically on a yearly basis, were used by the teachers of 60% of First class pupils and (unexpectedly) by teachers of just over 40% of Third and Sixth class pupils. Finally, less than one-third of pupils at any grade level had been assessed using curriculum profiles.

Table 7.27: Percentages (SE) of pupils assessed using various measures, by frequency of assessment

		Weekly	Monthly	Once a term	Yearly	Never
Teacher-made test	1st (N=2119)	83.4 (3.73)	7.6 (2.70)	3.5 (1.66)	2.5 (1.47)	2.9 (1.82)
	3rd (N=1792)	87.3 (4.18)	9.0 (3.52)	3.7 (2.41)	0.0	0.0
	6th (N=1923)	76.1 (4.86)	22.0 (4.73)	1.9 (1.34)	0.0	0.0
Progress tests accompanying reading schemes	1st (N=1949)	9.6 (3.60)	17.0 (3.74)	25.5 (5.06)	17.9 (4.00)	29.9 (4.80)
	3rd (N=1633)	2.7 (1.65)	11.0 (3.54)	27.3 (5.91)	10.8 (3.36)	48.1 (6.15)
	6th (N=1643)	1.0 (1.04)	25.3 (5.43)	20.2 (4.40)	11.3 (3.27)	42.2 (5.80)
Published checklists	1st (N=1806)	5.0 (2.77)	15.4 (4.34)	28.8 (4.83)	19.0 (4.51)	31.8 (5.97)
	3rd (N=1593)	0.0	16.7 (4.49)	8.1 (3.51)	16.8 (4.02)	58.4 (5.21)
	6th (N=1409)	0.0	11.2 (4.70)	11.0 (3.58)	16.7 (5.64)	61.1 (5.55
Teacher-made checklists	1st (N=1893)	26.8 (5.42)	27.6 (4.50)	19.1 (4.75)	14.2 (4.49)	12.3 (3.11)
	3rd (N=1637)	11.0 (4.09)	38.4 (6.11)	25.1 (6.35)	12.3 (4.27)	13.3 (4.12)
	6th (N=1705)	15.4 (3.85)	30.8 (6.00)	30.7 (5.29)	8.5 (2.84)	14.6 (4.56)
Standardised group tests	1st (N=2063)	0.0	0.9 (0.90)	6.5 (2.38)	83.1 (4.22)	9.6 (3.33)
	3rd (N=1768)	0.0	2.2 (1.55)	9.0 (2.97)	81.2 (4.72)	7.6 (3.40)
	6th (N=1882)	0.0	0.0.	6.0 (2.72)	87.3 (3.21)	6.7 (2.96)
Curriculum profiles	1st (N=1717)	1.6 (1.59)	0.5 (0.55)	2.0 (1.59)	27.6 (5.23)	68.3 (5.14)
	3rd (N=1565)	0.0	0.0	5.7 (1.71)	19.9 (4.13)	74.4 (4.38)
	6th (N=1497)	2.1 (1.53)	0.0	8.0 (3.93)	16.9 (5.03)	73.0 (6.67)
Early-screening tests	1st (N=1665)	0.0	0.0	4.2 (1.70)	55.8 (5.83)	40.0 (5.65)
	3rd (N=1528)	0.0	0.0	2.7 (1.55)	38.3 (5.89)	59.0 (6.13)
	6th (N=1416)	0.0	0.0	1.1 (1.12)	40.7 (5.62)	58.2 (5.83)

As can be seen from Table 7.27, the numbers of teachers who responded to some items is low. It is possible that instead of ticking that a measure was never used, it was left blank in some instances. If so, the data shown may somewhat inflate the proportion of pupils being assessed using these measures, as percentages shown are based on valid responses. Teachers' responses on the number of assessment techniques used were summed, but because of the large number of uncompleted items, values were missing for approximately one-third of pupils. Of those for whom data were available, 6.3% of Sixth class pupils were not assessed by any means other than teacher-made tests. Moreover, half of those assessed using teacher-made tests only were assessed no more than once or twice a month. The proportion of Third class pupils who were assessed only with teacher-made tests was 1.5% (all assessed at least weekly), while all First class pupils were assessed by at least one method other than teacher-made tests.

Computers and Teaching Practice

Use of computers to assist in teaching English decreased with grade level. Nineteen percent of First class pupils were in classes where computers were *not* used in the teaching of English reading and writing, compared to 24% of Third class and 31% of Sixth class pupils (Table 7.28). The most common way computers were integrated into the classroom was using word processing or publishing software to teach writing. Just under half (49%) of First class pupils, 57% of Third class pupils and 61% of Sixth class pupils used computers in this manner. Teachers of almost two-thirds of First class pupils indicated that they used computers to teach word identification skills, either to all pupils or to less able pupils only. In contrast, 46% of Third class and only 38% of Sixth class pupils were taught by teachers who used computers for this purpose. Finally, computers were used to teach higher order reading skills to 31% of First class pupils, 27% of those in Third class, and 22% of those in Sixth class.

Table 7.28: Percentages (SE) of pupils' teachers using computers in various ways to teach English

	1st (N=2131)	3rd (N=1840)	6th (N=1978)
Don't use	19.3 (4.46)	23.9 (5.39)	31.5 (4.99)
Word ID/spelling skills to *all*	54.8 (5.23)	30.3 (5.29)	22.0 (4.29)
Word ID/spelling skills to *less able* only	9.5 (2.91)	15.9 (3.86)	15.9 (3.43)
Higher order reading skills to *all*	25.4 (4.17)	18.9 (3.88)	15.2 (4.13)
Higher order reading skills to *less able*	5.2 (2.16)	8.3 (3.52)	6.9 (3.21)
Word processing / publishing software to teach writing	49.0 (5.57)	57.3 (6.55)	60.6 (4.65)

Homework

There was little difference by grade level in the number of days teachers assigned homework to their pupils (Table 7.29). First class pupils were assigned homework on an average of 4 days a week, compared to 3.9 days for Third and Sixth class pupils.

Table 7.29: Mean (SE) number of days per week homework was assigned

	Mean	1	2	3	4	5
1st (N=2093)	4.0 (0.06)	0.0	4.4 (1.96)	2.1 (1.54)	85.5 (3.84)	8.0 (3.29)
3rd (N=1842)	3.9 (0.05)	0.0	3.5 (2.01)	4.8 (2.28)	86.7 (4.01)	5.0 (2.69)
6th (N=1951)	3.9 (0.06)	1.0 (0.97)	0.7 (0.72)	15.1 (3.61)	74.8 (4.28)	8.4 (2.71)

Teacher expectations of parental involvement in homework, and engagement in paired / shared reading varied by grade level (Table 7.30). Teachers of 94% of First class pupils expected parents to help with homework on a daily or near daily basis, compared to teachers of 59% of Third class and only 32% of Sixth class pupils. Similarly, the teachers of 97% of First class pupils expected parents to engage in paired / shared reading with their child on a daily or weekly basis, compared to 80% of Third class pupils and only 48% of Sixth class pupils.

Table 7.30: Frequency (SE) with which teachers expected parents to help their child with homework, or to engage in paired reading

		Most or all days	Once or twice a week	Once or twice a month	Rarely or never
Help with English homework	1st (N=2078)	94.1 (1.99)	5.9 (1.99)	0.0	0.0
	3rd (N=1833)	58.7 (5.53)	23.6 (4.08)	6.1 (1.84	11.7 (3.59)
	6th (N=1933)	32.2 (5.34)	26.1 (5.26)	10.7 (3.56)	31.0 (5.24)
Engage in paired / shared reading	1st (N=2116)	70.0 (4.37)	27.0 (4.18)	1.6 (1.22)	1.3 (0.92)
	3rd (N=1846)	45.6 (5.64)	34.2 (5.41)	6.5 (2.75)	13.6 (4.44)
	6th (N=1903)	24.5 (5.10)	23.7 (4.86)	6.9 (2.88)	44.9 (5.54)

School Climate

The Teacher Questionnaire contained 13 items relating to school climate, including teacher perceptions of management efficiency, collegiality, disciplinary environment, parental involvement and attitudes towards innovation and professional development. The vast majority of responses indicated that teachers were satisfied with the 'climate' in their school, particularly in terms of relationships with colleagues. Table 7.31 and 7.32 present *mean rating scores* for each of the items relating to school climate (more detailed data are available in Appendix B). Teachers responded on a 5-point scale (ranging from strongly agree to strongly disagree). Responses of strongly agree were assigned a score of 1, responses of agree were given a score of 2, and so on. The average score

(mean frequency score) for each item was then calculated. A low score in Table 7.31 indicates satisfaction with an aspect of school climate. For example, a score of 1.5 suggests that a mean response was between *strongly agree* and *agree*.

As can be seen from Table 7.31, the highest mean score for any item is 2.8, suggesting that most pupils' teachers are satisfied with a variety of issues relating to school climate. In particular, mean scores for "There is a strong sense of community among the staff" and "Teachers who work on their professional development are respected" were no higher than 2.0. At least 75% of pupils' teachers, across all three grade levels, either agreed or strongly agreed with these two statements. The highest mean frequency scores (ranging from 2.6 to 2.8) were in relation to the statement "My school has a clear set of goals and priorities for staff development". Only teachers of half (51%) of Third class pupils, and 44% of First class and 41% of Sixth class pupils either agreed or strongly agreed with the statement.

Table 7.31: Mean (SE) ratings for positively keyed school climate items

	1st			3rd			6th		
	Mean* (SE)	N		Mean (SE)	N		Mean (SE)	N	
Time at staff meetings is used effectively	2.3 (0.12)	2101		2.1 (0.14)	1863		2.4 (0.13)	1923	
School has clear set of goals and priorities for teaching reading	2.3 (0.09)	2101		2.4 (0.11)	1845		2.3 (0.08)	1959	
School has a clear set of goals and priorities for discipline	2.2 (0.12)	2077		1.8 (0.13)	1863		2.1 (0.12)	1959	
School has a clear set of goals & priorities for staff development	2.7 (0.06)	2101		2.6 (0.12)	1863		2.8 (0.12)	1943	
Teachers who work on their professional development are respected	2.0 (0.09)	2101		2.0 (0.10)	1863		2.0 (0.09)	1927	
Teaching staff are sufficiently involved in decision-making	2.1 (0.09)	2086		2.0 (0.11)	1863		1.8 (0.09)	1959	
There is a strong 'sense of community' among the staff	2.0 (0.09)	2101		1.9 (0.11)	1847		1.9 (0.12)	1916	

* 1=strongly agree; 2= agree; 3= not sure; 4=disagree; 5= strongly disagree

Table 7.32 presents five further items relating to school climate. As these were negatively keyed, scoring has been reversed on these items to facilitate comparison with the mean rating scores presented in Table 7.31. Thus, as with Table 7.31, lower scores are indicative of satisfaction with a particular aspect of school climate.

Table 7.32: Mean (SE) frequency of responses to negatively keyed school climate items

	1st			3rd			6th		
	Mean* (SE)	N		Mean (SE)	N		Mean (SE)	N	
There is a negative attitude toward new ideas in this school	1.9 (0.11)	2101		1.8 (0.07)	1843		1.9 (0.11)	1959	
Would not feel able to ask for help if I had a problem with my work	1.7 (0.09)	2101		1.8 (0.12)	1863		1.6 (0.08)	1943	
School resources are not used effectively	2.6 (0.09)	2077		2.4 (0.12)	1844		2.7 (0.11)	1959	
The morale of teachers in the school is low	2.0 (0.09)	2101		1.9 (0.12)	1863		2.0 (0.12)	1943	
The school's disciplinary policy is not applied consistently	2.5 (0.13)	2101		2.4 (0.14)	1863		2.6 (0z.15)	1959	

* 1=strongly disagree; 2= disagree; 3= not sure; 4=agree; 5= strongly agree

As can be seen, most pupils' teachers did not feel that there was a negative attitude toward new ideas in their school, nor did they feel they would be unable to ask for help. Indeed, a minimum of 80% of teachers either disagreed or strongly disagreed that the statements reflected the climate in their school. Teachers' views on the consistency with which schools' disciplinary policies were applied, and the effectiveness with which school resources were used were less positive. Between 19% and 28% (Third and Sixth class, respectively) of pupils' teachers agreed or strongly agreed that the disciplinary policy was not applied consistently, while between 19% and 26% (Third and Sixth class, respectively) agreed or strongly agreed that resources were not used effectively.

Classroom Environment and Reading Achievement

A series of correlations was carried out between pupils' scale scores on the DSRT and various aspects of the classroom environment (Table 7.33). The first correlation shown is between achievement and a 'school climate' scale, which is the sum of the scores on 12 items[4] relating to school climate (Tables 7.31 and 7.32). Higher scores on the scale are indicative of lower satisfaction with the school climate. At First and Third classes, teachers' perception of school climate had a weak negative correlation with pupil achievement, meaning that greater teacher satisfaction with climate was associated with slightly higher pupil achievement scores. Across all grade levels, the number of years teachers had spent teaching had a weak to moderate correlation with reading achievement, as did the number of books in the classroom library, and the percentage of English instruction time devoted to whole class teaching. As a corollary, the percentages of time devoted to small group and individual teaching were negatively correlated with achievement (possibly indicating that grouping and individual tutoring was a response to low achievement).

At each grade level, the typical duration of English lessons has a weak negative correlation with achievement, although the percentage of English lessons typically spent on *instruction* (i.e., excluding time spent on classroom management) has a weak positive correlation. At First and Sixth classes, the number of minutes per day allocated for reading was negatively correlated with pupil achievement, although the correlation is weaker for First class and not significant for Third and Sixth if *reading instruction time* (excluding time spent on classroom management) is considered.

Table 7.33: Correlations between pupil achievement and selected class-level variables

	1st	3rd	6th
School climate scale	-.095**	-.071**	-.044
Teaching experience	.144**	.128**	.095**
No. of books in class library	.120**	-.086**	.062**
% whole class teaching	.156**	.149**	.078**
% small group teaching	-.144**	-.109**	-.073**
% individual teaching	-.028	-.118**	-.045*
Minutes per English lesson	-.110**	-.071**	-.048*
% lesson time on instruction	.045*	.048*	.056*
Minutes per reading lesson	-.111**	.010	-.067**
Minutes reading instruction time	-.083**	.008	-.036
Number of pupils in classroom	.154**	.026	.094**
Pre-lesson, outline purpose	-.021	.154**	.069**
Pre-lesson, establish prior knowledge	-.015	.058*	.058*
Post-lesson, examine comprehension	-.018	.080**	-.021

**p<.01   *p<.05.   For assistance in interpreting Table, see Inset 3.2 on page 34.

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[4] Exploratory factor analysis indicated that all items were significantly correlated with each other, but that the factor structure varied by grade level. Thus, for ease of comparison across grade levels, summed scores were used rather than scores derived from factor analysis.

In First and Sixth classes, the number of pupils in a classroom was positively correlated with achievement, with the correlation strongest amongst First class pupils. However, the correlation at the First class level drops from .154 to .112 if Breaking the Cycle schools (with a 15:1 ratio in Junior classes) are excluded. Finally, pupil achievement in Third and Sixth class had a weak positive correlation with teachers outlining the purpose of lessons at the outset and with teachers establishing their pupils' prior knowledge on a topic. End-of-lesson checks on what had been learned had a weak positive association with achievement, but only for Third class pupils.

Analyses were also carried out examining the relationship between various teacher characteristics and pupil achievement. There were no significant differences in pupil achievement by teacher gender or by teacher employment status (temporary/substitute or permanent) at any of the three grade levels. Although pupils taught by unqualified teachers had lower average achievement scores than their counterparts taught by qualified teachers, these differences did not reach significance at any grade level. Also, mean scores of pupils whose teachers had attained an extra qualification (such as an M.A.) were not significantly different from those whose teachers had only a basic teaching qualification. Among First and Sixth class pupils, there were no significant differences between the mean achievement scores of those taught by teachers employed on full-time basis compared to those on a part-time or job-share basis (Table 7.34). However, Third class pupils taught by part-time or job-share teachers had a higher mean achievement score than those taught by full-time teachers, while the latter had higher mean scores than those taught by teachers whose status was unknown.

Table 7.34: Teacher employment status (full-time or part-time/job-share), by pupils' mean achievement scores

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Part-time/JS	5.0	5.1	100.2	0.77	1.8	2.0	114.8	4.90	0.0	0.0	-	-
Full-time	91.2	94.9	95.3	3.12	86.1	98.0	100.5	1.10	92.4	100.0	99.8	0.75
Missing	3.8	0.0	100.4	5.16	12.1	0.0	94.0	1.98	7.6	0.0	102.1	2.40
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
PT/JS-FT	4.9	3.21	-2.6	12.4	14.2	5.0	**4.2**	**24.2**	-	-	-	-
Missing-FT	5.1	6.03	-9.0	19.2	-6.6	2.3	**-11.1**	**-2.1**	2.3	2.5	-2.7	7.3

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Finally, pupils' average scores across single grade and multigrade classrooms were compared. Again, the only significant differences were found amongst Third class pupils. Third class pupils taught in a single grade classroom had significantly higher average scores on the DSRT than did Third class pupils taught in either multigrade classrooms or pupils in classrooms where information on classroom composition was missing (Table 7.35).

Table 7.35: Pupils' mean achievement scores, by multigrade and single grade classroom composition

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Multigrade	10.7	11.1	102.6	2.58	13.1	15.1	100.2	1.13	3.7	4.0	100.2	4.15
Single	86.2	88.9	99.5	0.80	73.5	84.9	105.1	1.52	87.5	96.0	99.6	0.64
Missing	3.1	0.0	103.9	4.54	13.5	0.0	94.0	1.78	8.8	0.0	104.4	2.84
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
Multigr-single	3.0	2.7	-2.3	8.4	-4.9	1.9	**-8.7**	**-1.1**	0.6	4.2	-7.7	9.0
Missing-single	4.3	4.6	-4.8	13.5	-11.0	2.3	**-15.7**	**-6.4**	4.9	2.9	-0.9	10.6

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

8. School Environment

This chapter describes school-level characteristics, and explores associations between a variety of such characteristics and reading achievement. The chapter, which is divided into seven sections, is mainly based on the responses of the 90 principals who completed a School Questionnaire. The first section describes school enrolment characteristics, including school size, attendance rates, the proportion of pupils in need of, and in receipt of, additional support for learning difficulties, and the variation in pupil socioeconomic status across schools. The second section describes parent-school interaction, while the third examines school policy and planning issues, including assessment policies, and the nature of the School Development Plan in relation to English. The fourth section describes additional programmes associated with schools, including after-school programmes for pupils and programmes for parents. This is followed by a section detailing schools' learning resources, including libraries and computer technology. The sixth section outlines issues related to school staff and support personnel, including teaching posts and the use of adult volunteers. The final section relates some selected characteristics of schools to pupil achievement, and describes the creation of a composite measure of socioeconomic deprivation at the school-level.

Enrolment Characteristics

This section describes school enrolment, attendance rates and provision of additional support for pupils with learning difficulties. Some socioeconomic characteristics of schools are also outlined.

Enrolment and Attendance Rates

Principals were asked to indicate the total enrolment in their school on September 30th, 2002. Average school size was 202 pupils, although there was considerable variation, ranging from only 12 pupils in the smallest school to 774 pupils in the largest (Table 8.1). Approximately a quarter (27%) of schools had less than 100 pupils, while 16% had enrolments in excess of 300 pupils. An average of 90% (SE=1.25) of pupils had attended the same school for all grade levels offered by the school.

Table 8.1: Mean enrolment, standard error and range of school enrolment size

	N	Mean	Std Dev	% < 100	% > 300	Range
School size	89	201.6	126.2	27.0	15.5	12-774

Average annual attendance rates also varied considerably by school, ranging from 70% to 95%. Mean attendance for all schools surveyed was 89% (SE=0.40), which is slightly lower than the mean pupil attendance rates reported in Chapter 5. However, the latter are based on attendance rates of individual pupils for the January-March school quarter only. It is possible that poorer attendance in the weeks preceding and following school summer holidays accounts for the difference between the annual and January-March attendance rates.

Additional Support in English

Principals were asked to indicate the number of pupils in mainstream classes in receipt of additional support from learning-support teachers, resource teachers, and other sources (e.g., language support teachers for non-national pupils). Most pupils receiving additional support were being helped by a learning-support teacher sanctioned by the Department of Education and Science (averaging 14% of enrolments), while less than 1% were receiving learning-support from another source (Table 8.2). Seven percent of pupils received additional support from a resource teacher, and almost 2% received support from other sources (typically, a resource teacher for Travellers or a language support teacher for non-national pupils). An average of 23% of pupils received some form of additional support, (ranging from 0 to 63% of pupils within a school). However, some pupils may have been double counted, as a small number may have had more than one source of additional support.

Table 8.2: Mean percentage of pupils in receipt of additional support from various sources

	N schs	% pupils	SE	Range
DES-sanctioned LS teacher	87	14.2	1.80	0 - 32.9
LS teacher funded from other source	90	0.4	0.22	0 - 9.9
Total learning-support	*87*	*14.7*	*1.84*	*0 - 32.9*
Resource teacher	86	6.7	0.96	0 - 30.0
Other teacher	83	1.8	0.50	0 - 14.4
Total % (LS + RT + Other)	82	23.0	2.93	0 - 62.8

Principals were also asked to indicate the percentage of their enrolment they believed to be *in need* of learning-support. A small number of principals indicated that fewer pupils were in need than in receipt of learning-support. However, this may be because they did not include pupils already in receipt of support amongst the total number of pupils in need of support. Consequently, the data shown in Table 8.3 may slightly underestimate the proportion of pupils perceived to need learning-support. Principals also indicated the percentage of their enrolment that had been assessed for general or specific learning difficulties, and the percentage who had not been assessed, but whom principals felt needed to be assessed. As can be seen, an average of 26% of pupils in the schools surveyed was believed to be in need of learning-support. Moreover, 10% had been assessed by a psychologist for general or specific learning difficulties, with principals believing that a further 7% needed to be assessed. Indeed, the proportion who had been assessed ranged from none to 33% of pupils, while the percentage perceived to be in need of assessment was as high as 25%.

Table 8.3: Extent of need for learning-support, and percentage of pupils assessed or in need of psychological assessment for general or specific learning difficulties

	N	Mean	SE	Range
In need of LS for English	86	25.9	3.14	0 - 70
Ever assessed LD	89	10.2	1.46	0 – 33
In need of assessment	86	7.1	0.88	0 – 25

Comparing the percentage of pupils receiving learning-support (15%) with the percentage perceived to need support (26%), it appears that only slightly more than half of those perceived to be in need of learning-support were actually getting it. Moreover, principals' estimations of the percentages in need of learning-support show a slightly stronger (negative) correlation with mean pupil achievement than does the actual percentage in receipt (Table 8.4). Overall, associations between low achievement at pupil level and a school having a large proportion of pupils in need of learning-support, and in receipt of learning-support, ranged between weak and weak to moderate.

Table 8.4: Correlations between pupil achievement and percentage of pupils in receipt of, or in need of, learning-support in their schools, by grade level

		N	r	t	p
% in receipt	1st	1992	**-.116**	-2.944	0.006
	3rd	1940	**-.200**	-3.081	0.004
	6th	1945	-.050	-0.714	0.464
Total % in need	1st	2059	**-.187**	-3.908	<.001
	3rd	1898	**-.243**	-3.603	<.001
	6th	1978	**-.178**	-3.632	<.001

Significant differences in bold. For assistance in interpreting Table, see Inset 3.2 on page 34.

Socioeconomic Characteristics

This section describes aspects of the socioeconomic composition of schools, including variation between schools in the proportions of pupils in receipt of the books grant, covered by a medical card, with unemployed or early school leaver parents, and in the higher socioeconomic category on the ISEI scale. With the exception of the books grant, data are based on Parent Questionnaire responses.

Across all schools, an average of 75% (SE=2.87) of pupils received a grant under the School Books for Needy Pupils scheme. As can be seen from Table 8.5, in 6% of schools, less than a quarter of pupils received a grant, while in a further 15%, less than half of pupils did so. At the other extreme, in approximately a quarter of schools, at least 95% of the enrolment received a grant. Indeed, in 11% of schools, all pupils were entitled to a grant.

Table 8.5: Percentages (SE) of schools with varying proportions of pupils receiving a books grant

N	< 25%	25-50%	51-75%	76-94%	95% +
87	5.8 (2.30)	14.7 (3.21)	18.2 (5.67)	35.5 (8.96)	25.7 (5.57)

The mean proportion of pupils covered by the medical card scheme did not vary much by grade level.[1] At First class, 51% (SE=3.24) were covered, compared to 56% (SE=4.65) at Third class and 55% (SE=6.31) at Sixth class. However, there was considerable variation between schools in the proportion of pupils covered (Table 8.6). For example, whereas 9% of schools had Sixth classes where less than a quarter of pupils were covered by medical cards, 24% had Sixth classes where over three-quarters of pupils were covered.

Table 8.6: Percentages (SE) of schools with varying proportions of medical card holders, by grade level

	< 25%	25-50%	51-75%	75%+
1st (N=70)	7.0 (2.76)	42.9 (7.90)	35.6 (6.24)	14.5 (4.46)
3rd (N=69)	11.4 (4.41)	34.9 (6.93)	29.3 (6.12)	24.4 (8.27)
6th (N=69)	9.0 (3.72)	40.3 (8.45)	26.9 (5.67)	23.8 (10.26)

Parental employment rates (where at least one parent in full-time or part-time employment) were highest at Sixth class (84% [SE=2.15]) and lowest at First class (75% [SE=2.70]), with the Third class rate (81% [SE=2.70]) closest to that found at Sixth class. All Sixth class pupils surveyed were enrolled in schools where more than half of those at the same grade level within the school had at least one employed parent (Table 8.7). Indeed, in 21% of schools, every pupil in Sixth class had at least one employed parent. In contrast, in 9% of schools, up to half of those in First class had no parent employed, while only 5% of schools had First classes where every pupil had at least one employed parent.

Table 8.7: Percentages (SE) of schools with varying proportions pupils with an employed parent in the household, by grade level

	< 50%	50 - 75%	75-90%	90-99%	100%
1st (N=70)	9.2 (4.36)	38.3 (7.26)	32.2 (5.47)	15.3 (4.52)	4.9 (4.25)
3rd (N=69)	2.3 (2.31)	22.2 (7.16)	46.2 (8.99)	11.7 (3.68)	17.7 (9.15)
6th (N=69)	0.0	21.9 (5.93)	40.1(7.16)	17.2 (5.34)	20.9 (7.86)

As described in Chapter 6, an ISEI (*International Socio-Economic Index*) score was used to classify each pupil's family socioeconomic status. ISEI scores were further divided into quarters. Table 8.8 shows the variation between schools on the proportion of parents in the highest quarter. For example, at the Third class level, 26% of schools had no parents in the top ISEI quarter, while, at the other extreme, 21% had more than a quarter of parents in the top quarter.

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[1] Medical card data are specific to grade levels within a school, and were not available for schools as a whole. The mean percentages shown differ slightly from those in Chapter 6, where data refer to the proportion of individual pupils for whom data are available. Here, data refer to the aggregate of the mean proportions of pupils with medical cards at a grade level within a school (i.e., all pupils within a grade level within a school are assigned the same value, and no values are missing). The same caveat applies to data relating to employment, ISEI scores, and parental educational attainment.

Table 8.8: Percentages (SE) of schools with varying proportions of pupils from the highest quarter of ISEI scores

	None	< 10%	10-25%	> 25%
1st (N=70)	10.2 (6.42)	28.2 (4.85)	42.2 (7.06)	19.5 (4.86)
3rd (N=69)	25.8 (8.81)	15.9 (4.50)	37.2 (7.19)	21.1 (4.67)
6th (N=69)	21.4 (10.23)	24.7 (6.74)	41.6 (7.16)	12.2 (3.93)

Early school leaving, defined as having no formal second-level qualification, was selected as a socioeconomic indicator based on the strength of its association with achievement. At Third and Sixth class levels, 30% (SE=0.05 and 0.04, respectively) of pupils had an early school leaver parent, compared to 27% (SE=0.04) of First class pupils. Table 8.9 shows the variation between schools in the proportion of pupils with at least one parent who was an early school leaver. In a quarter of schools (at Third and Sixth class level), more than 40% of pupils came from families where at least one parent was an early school leaver, compared to 17% of schools, where First class was concerned. For First class, a minority (5% of schools) had less than 5% of pupils coming from an early school leaving family.

Table 8.9: Percentages (SE) of schools with varying proportions of pupils with at least one parent who was an early school leaver

	0 – 5%	5% - 20%	20% - 40%	> 40%
1st (N=70)	5.1 (2.65)	39.0 (7.57)	38.6 (5.54)	17.3 (7.15)
3rd (N=69)	15.3 (9.58)	21.5 (4.66)	38.1 (7.38)	25.1 (7.14)
6th (N=69)	13.5 (9.37)	22.6 (5.68)	39.5 (7.53)	24.5 (6.81)

Parent-School Interaction

Principals' responses indicated that 34% (SE=9.12) of schools did not have a Parents' Association. Examining the average number of parent-teacher meetings held, and the average attendance at such meetings, schools without Parents' Associations tended to have poorer average attendance rates at meetings than schools with Parents' Associations (Table 8.10). Overall, attendance at parent-teacher meetings averaged from 85% to 89% across grade levels. However, in schools without a Parents' Association, attendance ranged from 73% in Third class to 82% in Sixth class. An average of one parent-teacher meeting a year was held at each grade level.

Table 8.10: Mean number of parent-teacher meetings held, and percentage attendance, by grade level and existence of Parents' Association

Have Assoc	1st				3rd				6th			
	Meetings		% attend		Meetings		% attend		Meetings		% attend	
	N	Mean(SE)	N	Mean(SE)	N	Mean(SE)	N	Mean(SE)	N	Mean(SE)	N	Mean(SE)
Yes	40	1.1 (0.04)	35	90.2 (1.50)	35	1.0 (0.05)	32	89.5 (2.87)	34	1.4(0.16)	32	92.7 (1.39)
No	14	1.1 (0.07)	14	80.8 (4.37)	13	1.0 (0.07)	13	72.8 (7.54)	14	1.0 (0.04)	14	81.8 (4.05)
Total	58	1.1 (0.03)	53	87.4 (1.54)	53	1.0 (0.04)	50	85.3 (3.02)	53	1.2 (1.04)	51	88.5 (1.72)

School Policy and Planning

Almost all schools (97%) had a written school plan for English, with fewer having written policy statements about specific aspects of English teaching. As can be seen from Table 8.11, schools were less likely to have written policies concerning teacher and school self-evaluation (only 20% and 29% of schools, respectively), than to have policies in other areas. Most had written policies regarding the teaching of English reading (93%) and writing (89%), the identification of pupils with learning difficulties (89%), and pupil assessment (88%). Eighty percent had a written policy about when

formal reading instruction should begin, and the percentage rose to 89% when only schools with Junior classes were considered.

Table 8.11: Percentages (SE) of schools with a written School Plan for English and written policy statements about various topics

	N	% Yes	SE
School Plan for English	90	96.6	1.79
Teaching of English reading	88	92.8	3.01
Identification of pupils' learning difficulties	87	89.3	3.54
Teaching of English writing	88	88.9	3.94
Pupil assessment (including reading and writing)	87	88.0	4.13
Reporting on pupils' achievement and record keeping	86	84.8	4.26
When formal reading instruction should begin	83	79.9	4.10
Provision for individual pupils' needs	83	79.2	5.02
Use of literature (e.g., novels) to teach English reading	85	78.9	4.54
Class organisation (e.g., whole class / group / individual)	79	42.5	9.27
School self-evaluation	81	29.0	9.83
Teacher self-evaluation	82	20.0	9.82

The Board of Management and parents were the groups least likely to have input into the School Plan for English (Table 8.12). In 66% of schools, the Board had no involvement in the development of the plan, while parents had no input in almost half of the schools surveyed. In all schools, the principal, deputy principal (where the post existed) and staff as a whole all had at least some input into the development of the plan. Indeed, in most schools, these parties were described as having great involvement. A minority of principals reported other sources of help in the development of the plan. These included the local Education Centre, a Cuiditheoir / facilitator from the Primary Curriculum Support Service, a staff sub-group, and a NEPS psychologist.

Table 8. 12: Percentages (SE) of schools with varying degrees of involvement from stakeholder groups in developing the School Plan for English

	None	Some	Great
Board of Management (N=82)	66.4 (5.15)	31.5 (5.36)	2.1 (1.78)
Principal (N=86)	0.0	13.7 (4.28)	86.3 (4.28)
Deputy principal (N=78)	0.0	23.8 (5.92)	76.4 (5.92)
Learning-support teacher(s) (N=76)	1.4 (1.33)	15.3 (5.23)	83.3 (5.35)
Staff as a whole (N=86)	0.0	7.8 (3.38)	92.2 (3.38)
Parents (N=75)	46.6 (6.39)	52.5 (6.34)	0.9 (0.88)
Other (N=10)	5.5 (5.57)	24.6 (13.62)	69.8 (14.43)

Assessment

A large majority of pupils were enrolled in schools where there was a policy of administering early-screening tests or standardised checklists in the Infant classes. Excluding schools without Infants classes, 88.1% of schools administered such assessments. The MIST (*Middle Infants Screening Test*) was by far the most commonly used test (58% of schools), followed by the BIAP (*Belfield Infant Assessment Programme*) (26%) and the *Drumcondra Curriculum Profiles* (22%) (Table 8.13). Two percent administered school-developed tests, while 20% used other tests.

Table 8.13: Percentages (SE) of schools administering various standardised checklists or early-screening tests to Infants classes

N	BIAP	MIST	MICRA-T	Drum. Profiles	Own	Other
62	26.0 (8.41)	57.8 (8.96)	11.5 (4.26)	21.6 (12.54)	2.0 (1.25)	19.6 (5.89)

Most schools also had a policy of administering standardised tests on a regular (at least yearly) basis at other class levels (Table 8.14). Only 74% of schools with First classes had policies for testing First class pupils. Almost all (92% to 95%) schools with Senior classes had policies for testing Third, Fourth and Fifth classes, but the percentage declined slightly to 86% for Sixth class. The MICRA-T and the DPRT were the most commonly used tests (in 83% and 49% of schools, respectively), while the NRIT was used in a small proportion of schools (Table 8.15).

Table 8.14: Percentages of schools with a policy of regular standardised testing of English reading, by grade level

	1st	2nd	3rd	4th	5th	6th	*No policy any grade*
N	67	65	64	64	64	64	*89*
% with policy	74.2	79.7	94.9	92.3	94.9	85.9	*4.5*
Std. error	11.30	10.5	2.96	3.67	2.96	4.40	*2.55*

Table 8.15: Percentages (SE) of schools administering various standardised tests

N	MICRA-T	DPRT	NRIT	Other
85	83.5 (5.48)	48.8 (6.83)	7.1 (3.10)	11.7 (3.99)

School Policy on Reading Texts

In almost two-thirds (64.3% [SE=9.37]) of schools the policy regarding use of English reading texts was that reading was mainly taught using a combination of reading schemes and children's literature. One third (33.4% [SE=9.42]) indicated that reading was mainly taught using reading schemes, while small percentages indicated that it was mainly taught using children's literature (0.5% [SE=0.57]) or that the materials used were at the discretion of the class teacher (2% [SE=1.29]).

Additional Programmes

Principals were asked to indicate if their schools offered any programmes that supported parents in helping their children with English reading, and if there were any after-school programmes linked to the school that provided pupils with support in reading and writing.

Helping Parents to Help Pupils

Most schools (87%) offered some form of support to parents (Table 8.16). A minority offered courses for parents in curriculum English (20%) or in promoting reading aloud (38%). Almost half of schools offered advice on strategies for helping with homework, while paired or shared reading programmes were offered in 83% of schools. Just over a quarter of principals indicated that their school offered 'other' types of support to parents, including general parenting courses, book packs for parents of Junior pupils, and information meetings and talks for parents, while two schools offered literacy classes for parents. Parents of pupils in the Junior classes were most likely to be targeted (Table 8.17). Between 66% and 71% of schools with Infants classes provided programmes for parents of pupils in Infant classes. As pupils got older, there was a decline in the percentage of schools offering programmes, and by Sixth class, only 21% of schools with Sixth classes did so.

Table 8.16: Percentages of schools offering various support programmes to parents to help with reading

	% (N=90)	SE
Paired / Shared reading	83.4	4.45
Promoting reading aloud	38.3	7.57
Strategies for helping with homework	48.6	8.30
Curriculum English courses for parents	20.1	4.67
Other	26.9	6.81
Total % offering *any* programme	86.6	3.90

Table 8.17: Percentages of schools with programmes to support parents in helping with English reading, by grade level at which programme is offered

	JI	SI	1st	2nd	3rd	4th	5th	6th
N	55	55	64	61	59	59	59	59
% offer prog.	65.5	70.5	58.3	61.0	45.9	33.8	25.4	20.8
SE	6.92	6.56	11.02	7.08	8.03	8.00	11.36	11.30

After-School Programmes

Principals were asked to provide details of any after-school programme associated with their school that provided support with reading and writing to pupils and/or their parents. Fifty-eight percent of schools had associated after-school programmes, and a significant minority of these had multiple programmes. Given the diversity in the aims of, and methods used by such programmes, this section will not provide an in-depth account of this work. Instead, programmes are summarised by funding source, grades targeted and nature of the programme. Furthermore, data presented are unweighted.

Programmes tended to be targeted[2] at older pupils (Table 8.18). Only 7% of schools had programmes in which Junior Infants were targeted, while even fewer (6%) targeted Senior Infants. The grade levels most frequently targeted were Fifth and Sixth class (40% and 39% of schools, respectively). Only one school provided details of an after-school programme targeting parents rather than pupils, while 9% targeted specific pupils instead of all those at a particular grade level.

Table 8.18: Percentage of schools in which various grade levels are targeted by after-school programmes

	JI	SI	1st	2nd	3rd	4th	5th	6th	Specific pupils	Adults
No. of schools	6	5	12	26	30	32	36	35	8	1
% (of 90) schools	6.7	5.6	13.3	28.9	33.3	35.6	40.0	38.9	8.8	1.1

Numbers and percentages are unweighted

There were many funding sources for after-school programmes, with few sources sponsoring more than one project. The exceptions were the School Completion Programme (which sponsored clubs in 23 schools), Local Area Partnerships (17 schools), Youth Encounter Projects / Neighbourhood Youth Projects (4), local Resource / Family and Community Centres (3), Barnardos (2) and BITE (Ballymun Initiative for Third Level Education) (2). In some instances, principals did not identify the funding body. Of the 8 programmes targeted at specific pupils, 4 were sponsored by Youth Encounter Projects / Neighbourhood Youth Projects, one by Focus Housing and two by an unspecified source. By far the commonest type of programme was a Homework Club, operating in 48 schools. Three schools offered a Reading Club, two offered a Breakfast Club, and a further two offered paired reading as an after-school activity. Other types of activities provided included a Storytelling Club, Infants After-school Activities, Word Games Club, Soccer for Success, and Art, Sport and Self-Esteem. Most programmes were available to pupils on two afternoons a week.

Schools' Learning Resources

In this section, some resource-related data are presented, including availability of library books within schools, factors hampering the teaching of reading, and the availability and use of computers.

Libraries and Library Books

A large majority of schools (92.8%) had a library in each classroom, while the remainder had a library in most classrooms. Principals were asked if, aside from class libraries, their school had a

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[2] The data represent the unweighted number and percentage of *schools* in which a grade was targeted, not the *number of programmes* targeting a grade. Thus, for example, a school in which all three after-school programmes targeted First class would only contribute one to the First class data in Table 8.18.

school library. Most schools had either a room used exclusively as a school library (30.5% [SE=7.50])) or a room used as a library and for other purposes (26.8% [SE=5.40]). However, 42.8% [SE=8.97] of principals indicated that they did not have any school library. Ninety percent of schools supplemented either their class libraries or school library with books from the Local Authority library service.

Principals were asked approximately how many books were in their school library (including any Local Authority library books, but excluding class library books). Data are excluded for the small number of principals who had previously indicated that they had no school library, yet answered the item (suggesting that they were considering class rather than school library books). Principals reported an average of 2209 [SE=705.03] books in school libraries, ranging from 200 books in the smallest, to 8000 in the largest library. However, this may represent an inflation of the average number of *school library* books, due to the possible inclusion of books in class libraries by some principals.

Computing Resources

Schools had an average of 20 computers (11 in classrooms and 9 in a central room) (Table 8.19). However, there was considerable variation in both the number of computers in schools, and where they were located. For example, while only 3% did not have any computers in classrooms, 26% did not have any in a central room. Given that the number of computers in a school might reasonably be expected to be linked to enrolment, the average ratio of computers to pupils was calculated. On average, there was one computer for every 10 pupils (SE=0.95), but the ratio ranged from one computer for every two pupils to one computer for every 31 pupils. Generally, larger schools had poorer ratios than did smaller schools.

Table 8.19: Number of computers in classrooms, central computer rooms, and in total

	N	Mean	SE	% None	Range
Central room	86	9.1	0.86	25.9	0 - 30
Classroom	89	11.2	1.11	2.9	0 - 50
Total	86	20.3	1.31	0	6 - 68

Principals were asked to rate the helpfulness of computers in the teaching of reading and writing. Less than one third (29.9% [SE=5.95]) thought that they were a major help, while 70.1% [SE=5.95] thought that they were of some help. None felt that computers were not helpful.

The frequency with which computers were used as part of the English curriculum did not vary much by grade level (Table 8.20). Computers were used on a daily basis with First class pupils in 6% of schools, and with Sixth class pupils in 12% of schools. In at least 71% of schools, computers were used either a few times a week or a few times a month at each of the three grade levels. In approximately 12% of schools, computers were rarely or never used as part of the English curriculum for First or Third class pupils, while 17% of schools rarely or never used computers with Sixth class pupils.

Table 8.20: Percentage of schools where computers were used with various frequencies as part of the English curriculum, by grade level

	1st (N=64)	3rd (N=52)	6th (N=51)
	% (SE)	% (SE)	%(SE)
Daily	6.0 (5.76)	11.7 (7.12)	12.0 (7.29)
Few times a week	53.2 (7.65)	42.9 (8.11)	31.2 (6.59)
Few times a month	29.0 (6.44)	33.2 (6.82)	39.5 (6.32)
Rarely or never	11.8 (4.73)	12.2 (4.84)	17.2 (5.74)

Obstacles to Teaching Reading

Principals were presented with a list of factors, and asked to indicate how much, if at all, each hampered the teaching or learning of reading in their school. Relatively few factors were rated by principals as being very much an obstacle (Table 8.21). However, inadequate psychological services and low parental literacy levels were described as very much an obstacle to teaching reading by 63% and 53% of principals, respectively. Almost a quarter felt that a shortage of learning-support services for English, very much hampered the teaching of reading, while a similar proportion cited multigrade classroom arrangements. Almost 90% felt that lack of support from parents hampered the teaching of reading at least to some extent, while pupils' lack of interest was cited by 81%.

Material resources such as books and resource material for teachers were less frequently perceived as obstacles than were more intangible factors such as parental support. Most schools seemed to have an adequate supply of books and workbooks, as at least two-thirds indicated that a shortage of workbooks, poor quality library books, or a shortage of library books did not hamper the teaching of reading in any way. However, just over half felt that insufficient computer software was, at least to some extent, an obstacle.

Approximately half of principals believed that each of inadequate pre-service training, inadequate in-service training, and a shortage of suitably qualified teachers were, at least to some extent, obstacles to teaching reading, with 40% indicating that teachers' resistance to change was an obstacle. Finally, while 58% did not believe that large classes were an obstacle, a further 18% stated that they were very much an obstacle. A number of principals raised issues other than those listed. These included poor pupil attendance, dealing with non-national pupils with limited English, poor language skills generally, and poor home environment.

Table 8.21: Percentages (SE) of principals who perceived the teaching of reading to be hampered by various factors

	N	No	A little	Very much so
Inadequate psychological services	89	17.0 (8.84)	20.1 (6.64)	63.0 (6.20)
Low parental literacy levels	90	11.9 (8.83)	34.8 (5.56)	53.3 (8.52)
Lack of support from parents	87	10.9 (9.08)	56.3 (8.89)	32.8 (6.10)
Shortage of learning-support services	86	45.6 (8.86)	30.0 (7.80)	24.3 (5.25)
Multigrade class arrangements	60	51.1 (11.0)	24.3 (4.98)	24.6 (9.84)
Insufficient teaching time	81	50.2 (6.44)	31.3 (5.19)	18.5 (3.95)
Pupils' lack of interest	87	19.3 (8.90)	61.7 (9.08)	19.0 (4.89)
Large classes	87	57.7 (8.24)	24.6 (4.82)	17.6 (5.82)
Insufficient computer software for teaching reading and writing	86	47.5 (9.05)	37.4 (8.78)	15.1 (4.62)
Shortage of suitably qualified teachers	88	49.6 (8.47)	36.1 (8.20)	14.2 (3.94)
Inadequate in-service training	85	49.4 (8.95)	37.1 (8.23)	13.5 (4.07)
Inadequate pre-service training	86	50.4 (8.21)	38.4 (7.67)	11.2 (3.92)
Poor quality / uninteresting books	88	71.1 (5.62)	21.1 (3.96)	7.8 (4.74)
Insufficient resource material for teachers (e.g., charts, word walls)	87	63.6 (8.18)	30.8 (8.17)	5.5 (2.64)
Shortage of library books	87	66.1 (5.94)	30.7 (5.82)	3.2 (1.75)
Resistance to change by teachers	85	60.2 (5.87)	36.6 (5.77)	3.2 (1.83)
Shortage of workbooks / worksheets	87	79.9 (5.82)	18.3 (5.72)	1.7 (1.26)
Other	13	0.0	10.1 (7.02)	89.9 (7.02)

When asked to indicate which of the obstacles they perceived to be the three most serious, six items were selected far more frequently than were any others (Table 8.22). Almost a quarter of principals felt that lack of support from parents was the most serious obstacle to teaching reading in their school. If the first, second and third most serious obstacles are considered, 63% cited low parental literacy levels, 44% cited inadequate psychological services, while 39% cited lack of

parental support. Large classes, lack of pupil interest, and shortage of learning-support services were each cited by approximately a quarter of principals who responded to the item.

Table 8.22: Percentages[3] (SE) of principals reporting various factors as one of the three most serious obstacles to the teaching of reading in their school

	Most serious		Second most		Third most		Total	
	% (SE)	N	% (SE)	N	% (SE)	N	% (SE)	N
Low parental literacy levels	17.1 (5.00)	14	28.6 (5.35)	23	16.6 (4.40)	13	63.0 (5.10)	50
Inadequate psychological services	11.3 (3.26)	9	16.5 (4.41)	13	14.4 (4.83)	11	43.5 (6.28)	33
Lack of support from parents	23.6 (6.67)	19	10.3 (2.78)	8	5.2 (2.52)	4	38.7 (6.26)	31
Large classes	6.8 (2.84)	6	7.2 (3.82)	6	10.7 (3.36)	8	25.1 (4.75)	20
Lack of pupil interest	5.2 (2.73)	4	7.8 (3.41)	6	12.0 (5.52)	9	25.7 (6.19)	19
Shortage of learning-support services	13.4 (4.15)	11	10.5 (3.88)	8	2.9 (1.75)	2	27.6 (4.52)	21

Teaching Staff and Support Personnel

The average number of full-time teaching staff in the schools surveyed was 14, ranging from 2 teachers in the smallest to 42 in the largest school (Table 8.23). There was an average of less than one unqualified teacher per school, equivalent to 5% of all teaching staff. This is lower than the proportion of unqualified staff reported in Chapter 7. However, the data in the previous chapter referred to the proportion of unqualified *class teachers*, whereas the data supplied by the principals refer to the proportions of all teaching staff that are unqualified. Although 60% of schools had no unqualified teachers, 16% of principals reported that at least 10% of their staff were unqualified.

The average number of teachers assigned as learning-support teachers was 1.3 per school, with an average of 1.8 assigned as resource teachers. An average of just under 4 full-time teaching vacancies per school arose in the two years prior to the survey (equivalent to an average turnover of one quarter of teaching staff in schools), and only 11% of schools did not have any vacancies during that time. In 8% of schools, the turnover rate at least equalled 50% of teaching posts. Conversations with principals revealed that many did not include short-term vacancies (e.g., sick leave or maternity leave) in the number of vacancies filled. Furthermore, where vacancies arose that were filled by an unqualified teacher on repeated short-term contracts, or by more than one teacher on short-term contracts, principals typically counted such instances as one vacancy. Consequently, the data may represent a slight underestimation of the percentage change in teaching staff over the two year period in question.

Table 8.23: Mean number of teaching posts, unqualified teachers, and vacancies per school

	N	Mean	SE	Range
No. of full-time teaching posts	90	14.1	1.02	2 - 42
No. of unqualified teachers	89	0.8	0.14	0 – 7
Unqualified as % of teaching staff	89	5.0	1.20	0 – 29.2
No. of LS teachers assigned	90	1.3	0.14	0 – 8.5
No. of resource teachers	89	1.8	0.20	0 – 10.0
No. of vacancies (last 2 yrs)	90	3.8	0.46	0 – 17
Vacancies as % of teaching staff	90	25.2	4.03	0 – 71

In response to a separate question, 40% of principals indicated that it was very difficult to find qualified staff to fill teaching vacancies, while 21% thought that it was somewhat difficult to do so (Table 8.24). However, 38% thought that it was very easy or fairly easy to do so. Most principals (55%) indicated that they had no difficulty retaining qualified teaching staff, while only 13% indicated that they had great difficulty doing so (Table 8.25).

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[3] As some principals provided only one response, percentages are taken as a proportion of 81 (the number who provided a rating for at least one obstacle).

Table 8.24: Percentages (SE) of principals indicating the extent of ease or difficulty in filling teaching vacancies with qualified staff

	Very easy	Fairly easy	Not sure	Somewhat difficult	Very difficult
N=81	10.9 (3.06)	27.1 (5.30)	0.5 (0.48)	21.2 (4.49)	40.4 (5.68)

Table 8.25: Percentages (SE) of principals indicating the extent of difficulty in retaining qualified teaching staff

	Great difficulty	Some difficulty	No difficulty
N=89	13.2 (4.15)	31.5 (6.83)	55.3 (7.98)

Over the previous three years, schools had held an average of 4 days in-career development related to the development of literacy skills in English for the staff as a whole (Table 8.26). The number of days organised ranged from 1 to 10 days, with most (74%) falling between 3 and 5 days. Reading was discussed at an average of just over 2 staff meetings during the 2002/2003 school year, with the frequency ranging from zero to 9 times Ten percent of schools had not discussed the teaching of reading at staff meetings, while 75% had discussed it between 1 and 3 times.

Table 8.26: Number of whole-school ICD days related to English (1999-2003), and number of staff meetings in 2002/03 at which teaching English reading was discussed

	N	Mean	SE	Range
Whole-school ICD in English	79	4.0	0.24	1 – 10
English discussed at staff meeting	88	2.3	0.18	0 – 9

Finally, principals were asked how satisfied they were with support received by teachers in their school for planning for and teaching reading and writing. Almost two-thirds were somewhat satisfied, 23% were very satisfied, and only 10% were somewhat dissatisfied (Table 8.27).

Table 8.27: Percentages of principals indicating their satisfaction with support for planning and teaching reading and writing

	Very satisfied	Somewhat satisfied	Unsure	Somewhat dissatisfied	Very dissatisfied
N=84	22.8 (4.56)	62.0 (6.07)	4.7 (2.12)	10.5 (3.87)	0.0

Adult Volunteers

Slightly more than half of schools (56%) did not use adult volunteers to support the teaching of reading in the school during school hours, while 79% did not involve adult volunteers in after-school programmes (Table 8.28).

Table 8.28: Percentage (SE) of schools, by grade level offered, where adult volunteers were used either during school hours or in after-school programmes

	During school hours		After-school programmes	
	N[4]	% (SE)	N	% (SE)
Not used	85	56.5 (8.69)	52	78.6 (7.07)
JI	55	20.8 (6.29)	52	11.8 (6.32)
SI	55	33.7 (7.82)	58	11.8 (6.32)
1st	64	28.2 (9.13)	60	10.8 (6.69)
2nd	62	33.1 (9.34)	59	15.8 (7.35)
3rd	62	16.9 (6.92)	58	22.5 (8.27)
4th	62	15.7 (6.93)	58	22.2 (8.35)
5th	62	13.6 (5.07)	58	23.3 (8.36)
6th	62	12.5 (4.90)	58	22.2 (8.36)

[4] With the exception of 'Not used', all Ns refer to the number of schools offering a particular grade level.

Adult volunteers were most likely to help Junior classes during school hours, but most likely to help Senior classes if after-school programmes are considered. Adult volunteers were used in one third of Senior Infants and Second classes, but in less than 17% of Third through Sixth classes. In contrast, less than 12% of Junior Infants through First classes received help from adult volunteers in after-school programmes, but this rose to between 22% and 23% for Third through Sixth classes.

School-level Characteristics and Pupil Achievement

The previous sections have described various characteristics of schools. In this section, the relationship between pupil achievement and selected school-level characteristics (including gender composition, school size and type, teacher turnover, attendance rate, learning-support, and school policy on teaching and pupil assessment) are examined. Then, the creation of a school-level composite of socioeconomic deprivation is described, followed by a description of how the composite variable relates to pupil achievement. Finally, correlations between some school-level variables and achievement are presented. All analyses are performed at the Third class level, as this is the level at which performance in reading was modelled (see Chapter 11).

Half of pupils attended a mixed school, with approximately a quarter attending either an all-boys or an all-girls school (Table 8.29). There are no significant differences in achievement related to school gender composition. Just over half of pupils attended schools classified as 'large' (see Chapter 3). Pupil mean achievement did not vary significantly by school size (Table 8.30).

Table 8.29: Mean pupil achievement by school gender composition, Third class

	%T	%A	Mean	SE
Boys	25.8	25.8	97.7	2.18
Mixed	49.6	49.6	99.3	1.42
Girls	24.6	24.6	103.9	1.74
Comparisons	Diff	SED	95% BCI	
Boys-Girls	-6.2	2.8	-12.7	0.4
Mixed-Girls	-4.6	2.2	-9.8	0.7

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 8.30: Mean pupil achievement scores by school size, Third class

	%T	%A	Mean	SE
Small	17.4	17.4	96.4	3.27
Medium	28.4	28.4	100.8	1.94
Large	54.2	54.2	100.7	1.18
Comparisons	Diff	SED	95% BCI	
Med-Small	4.4	3.8	-4.5	13.3
Lrg-Small	4.3	3.5	-3.8	12.5

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Schools' annual average attendance rates were categorised into low, medium, and high. Mean attendance rate for schools in the low category was 85%, compared to 89% in medium category schools, and 92% in schools in the high attendance category (Table 8.31). Pupils in schools in the low category achieve significantly poorer mean scores than pupils in schools in the high category for rates of attendance (95.4 versus 105.2, respectively). Schools were also categorised according to the extent of teacher turnover (Table 8.32). There were no significant differences in mean pupil achievement based on teacher turnover. Similarly, schools were divided into low, medium and high categories based on the percentage of pupils in receipt of learning-support (Table 8.33). Pupils in schools in the high category (an average of 23% of pupils in receipt of learning-support) have significantly lower scores than pupils attending schools in the low category (an average of 9% of pupils in receipt of learning-support). However, those in schools for which data on learning-support are missing have an even poorer mean score (92.0) than those attending schools in the high learning-support category (97.2).

Table 8.31: Mean pupil achievement scores by school attendance, Third class

	%A	%T	Mean	SE
Low (mean=84.5%)	30.9	33.0	95.4	1.67
Medium (mean=88.9%)	32.6	34.8	100.6	1.38
High (mean=92.3%)	30.2	32.2	105.2	1.58
Missing	6.4	0.0	94.6	3.45
Comparisons	Diff	SED	95% BCI	
Med-Low	5.2	2.2	-0.3	10.6
High-Low	9.7	2.3	**4.0**	**15.5**
Missing-Low	-0.9	3.8	-10.5	8.8

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 8.32: Mean pupil achievement scores and teacher turnover, Third class

	%A	%T	Mean	SE
Low (mean=9.9%)	33.9	33.9	101.2	1.81
Medium (mean=24.1%)	31.4	31.4	100.9	2.00
High (mean=44.0%)	34.7	34.7	98.0	1.43
Comparisons	Diff	SED	95% BCI	
Med-Low	-0.3	2.7	-6.6	6.0
High-Low	-3.2	2.3	-8.6	2.2

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 8.33: Mean pupil achievement scores and learning-support, Third class

	%A	%T	Mean	SE
Low (mean=9.1%)	30.4	33.2	103.7	1.42
Medium (mean=13.9%)	31.6	34.5	101.2	2.05
High (mean=23.3%)	29.5	32.3	97.2	1.36
Missing	8.5	0.0	92.0	2.34
Comparisons	Diff	SED	95% BCI	
Med-Low	-2.5	2.49	-8.8	3.8
High-Low	-6.6	1.96	**-11.5**	**-1.6**
Missing-Low	-11.7	2.73	**-18.6**	**-4.9**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Approximately 90% of schools reported having a policy statement in relation to pupil assessment and to the teaching of English reading. Differences in mean achievement scores between schools that did or did not have a policy in relation to pupil assessment or on the teaching of reading were not statistically significant. Mean achievement scores of pupils in vertical and Senior schools were also compared, but no significant differences were found.

A School-level Composite of Socioeconomic Deprivation

An earlier section contained some descriptive statistics relating to variation in the socio-economic composition of schools. This section relates four socioeconomic factors to pupil achievement, and describes the development of a composite measure of socioeconomic deprivation. Data relate to Third class only.

The four socioeconomic variables selected were the proportions of pupils:
- covered by the medical card scheme
- in receipt of a grant for books
- in the highest ISEI category
- with at least one early school leaver parent.

While each variable is continuous, (i.e., proportion of pupils), variables are categorised by quarters in the following tables. In each table, the 1st quarter represents schools with the lowest proportions of pupils having a particular characteristic, while the 4th quarter represents schools with the highest proportions.

Table 8.34 shows the mean achievement scores of pupils, split into quarters by percentage medical card possession at the school level. It also shows the average school-level rate of medical card possession for each quarter. For example, in schools in the lowest quarter of medical card possession, an average of a quarter of schools' enrolments have medical cards, whereas in the top quarter, the average is 77%. Mean reading achievement in schools in the highest quarter is significantly poorer than in schools in the lowest quarter (over two-thirds of a standard deviation). Thus, schools with large numbers of pupils covered by the medical card have poorer mean achievement scores than schools with few pupils covered by the card.

Table 8.34: Mean achievement scores of pupils in schools with varying proportions of pupils covered by medical cards, Third class

	N pupils	Mean	SE
1st quarter (mean=24.5%)	499	107.4	1.18
2nd quarter (mean=46.9%)	639	101.1	1.11
3rd quarter (mean=58.6%)	464	95.6	1.40
4th quarter (mean=76.9%)	519	95.5	2.58
Comparisons	Diff	SED	95% BCI
1st – 4th	11.9	2.84	**4.8**	**19.0**
2nd – 4th	5.6	2.81	-1.5	12.7
3rd – 4th	0.1	2.94	-7.3	7.5

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Similarly, achievement in schools in the highest quarter for proportion of pupils in receipt of the books grant is significantly poorer than achievement in schools with the lowest and second lowest proportions of pupils (up to two-thirds of a standard deviation) (Table 8.35).

Table 8.35: Mean achievement scores of pupils in schools with varying proportions of pupils in receipt of a books grant, Third class

	N pupils	Mean	SE
1st quarter (mean=31.6%)	499	105.8	1.88
2nd quarter (mean=62.5%)	546	102.6	1.22
3rd quarter (mean=83.2%)	528	96.6	1.51
4th quarter (mean=98.4%)	547	95.4	1.65
Comparisons	Diff	SED	95% BCI
1st – 4th	10.4	2.50	**4.1**	**16.7**
2nd – 4th	7.2	2.05	**2.0**	**12.4**
3rd – 4th	1.2	2.24	-4.4	6.8

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Those in schools in the highest quarter for the proportion of pupils with an early school leaver parent perform significantly poorer than those in schools in the other quarters (Table 8.36). Indeed, the difference is almost one full standard deviation when comparing pupils in schools with the highest and lowest proportions. Finally, Table 8.37 shows the relationship between achievement and the proportion of parents in the highest ISEI category. Pupils in schools with fewest parents (3%) in the highest category perform significantly poorer (by two-thirds of a standard deviation) than those in schools with the largest proportion (38%) in the highest category.

Table 8.36: Mean achievement scores of pupils in schools with varying proportions of pupils with at least one early school leaver parent, Third class

	N pupils	Mean	SE
1st quarter (mean=10.6%)	458	107.6	1.32
2nd quarter (mean=22.1%)	544	100.9	1.73
3rd quarter (mean=32.9%)	562	99.7	1.02
4th quarter (mean=53.0%)	555	93.3	1.94
Comparisons	Diff	SED	95% BCI
1st − 4th	14.3	2.3	**8.4** **20.2**
2nd − 4th	7.6	2.6	**1.1** **14.1**
3rd − 4th	6.4	2.2	**0.9** **11.9**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 8.37: Mean achievement scores of pupils in schools with varying proportions of pupils in the highest ISEI category, Third class

	N pupils	Mean	SE
4th quarter (mean=37.8%)	536	106.5	1.80
3rd quarter (mean=23.2%)	483	100.8	1.26
2nd quarter (mean=11.9%)	548	97.5	1.34
1st quarter (mean=3.3%)	554	95.6	2.12
Comparisons	Diff	SED	95% BCI
4th − 1st	10.9	2.78	**3.9** **17.9**
3rd − 1st	5.2	2.47	-1.0 11.4
2nd − 1st	1.9	2.51	-4.4 8.2

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table 8.38 shows the inter-correlations between school-level proportions for each SES variable. All variables are significantly correlated with one another. The medical card and ISEI variables are most strongly correlated (r=-0.7), while early school leaving and the books grant variables have the weakest correlation (r=.49), although they are still moderate to strongly correlated.

Table 8.38: Correlations between school-level socio-economic variables, Third class

	% Books Grant	% Medical Cards	% Highest ISEI	%ESL Parent
% Books Grant	1.000	**0.585**	**-0.514**	**0.488**
% Medical Cards	**0.585**	1.000	**-0.696**	**0.641**
% Highest ISEI	**-0.514**	**-0.696**	1.000	**-0.577**
%ESL parent	**0.488**	**0.641**	**-0.577**	1.000

Correlations in this table are unweighted. For assistance in interpreting Table, see Inset 3.2 on page 34.

Exploratory factor analysis was carried out on these four socio-economic variables in order to produce a summary measure of SES. Using principal component analysis, one factor was extracted, which accounted for 69% of the variance. A single composite score of SES deprivation was calculated for each school. The mean of these scores was 0 and the standard deviation was 1. Table 8.39 shows that the composite score has a moderate to strong negative correlation (r=-0.44) with achievement at the school level. Thus, mean school achievement tends to be lower in schools that have a high SES deprivation score.

Table 8.39: Correlation between school-level SES deprivation composite scores and mean school achievement, Third class

	r	t	P
3rd class	-0.437	-2.363	0.000

For assistance in interpreting Table, see Inset 3.2 on page 34.

School-level SES deprivation composite scores were categorised into low, medium, and high, and each pupil was assigned their school's value (which, in turn, was based on mean pupil values). As can be seen from Table 8.40, pupil achievement in schools with a low SES deprivation score is significantly higher than in schools with a medium or high deprivation score (106.7 versus 100.4 or 94.0, respectively).

Table 8.40: Mean pupil achievement scores for schools with a low, medium or high SES deprivation score, Third class

	N pupils	Mean	SE
Low dep.	629	106.7	1.16
Medium dep.	734	100.4	0.96
High dep.	757	94.0	1.78
Comparisons	Diff	SED	95% BCI
Med dep - low dep	-6.3	1.51	**-9.8** **-2.8**
High dep – low dep	-12.7	2.12	**-17.7** **-7.7**

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Correlations Between School-level Variables and Pupil Achievement

The SES deprivation variable outlined in the previous section is based on pupil data, aggregated to the school level, and can be applied to all 69 schools (and 2,120 pupils) for whom Third class achievement data were available. In this section, the intercorrelations between some school-level variables and pupil achievement are presented. Most data are based on responses to items in the School Questionnaire. As can be seen from Table 8.41, all variables presented show a significant correlation with pupil-level achievement. The school-level deprivation score shows the strongest correlation (r=-.38[5]) with pupil achievement, while the proportion of unqualified teachers in a school shows the weakest (r= -.08). The negative sign of the correlations indicate that as the SES deprivation score or percentage of unqualified teachers increase, achievement decreases. School-level attendance rates were positively correlated with achievement (r=.24), as was the percentage of pupils who were girls in a school (r=.14) and attendance rates (for Third class pupils' parents) at parent-teacher meetings (r=.17). Achievement was negatively correlated with teacher turnover (r=-.14) and the percentage of a school's pupils perceived to be in need of learning-support (r=-.24) or psychological assessment (r=-.21), as well as the proportion in receipt of learning-support (r=-.20).

Aside from their relationship to pupil-level achievement, most of the school-level variables were significantly correlated with each other. For example, the school SES deprivation score had a moderate to strong correlation with the proportion of pupils perceived to be in need of learning-support (r=.44) or psychological assessment (r=.40), or in receipt of learning-support (r=-.44), and showed an equally strong (but negative) correlation with school-level attendance (r=-.46). In other words, schools that could be described as socioeconomically deprived were likely to have larger proportions of pupils in need of learning-support and assessment, and to have poorer school-level attendance rates.

There were also moderate negative correlations between school-level attendance rates and the proportions of pupils in need of learning-support or psychological assessment, and a weaker negative correlation with the proportion of pupils in receipt of learning-support. The proportions of pupils in need or in receipt of learning-support, and in need of psychological assessment were all significantly intercorrelated. The proportion of unqualified teachers in a school was moderately correlated with the percentage in receipt of learning-support (r=.30), but was only weakly to moderately correlated with the percentage in need of learning-support (r=.15) or psychological assessment (r=.15).

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[5] The *r* shown (-.38) differs from that shown in Table 8.39, as the latter refers to the correlation with mean *school-level* achievement, whereas Table 8.41 shows the correlation with *pupil-level* achievement.

The percentage of girls in a school showed a moderate correlation with attendance at parent-teacher meetings, meaning that attendance at such meetings was typically higher in schools with greater proportions of girls. Attendance rates at parent-meetings was negatively correlated with the deprivation score (r=-.24), and had weak to moderate negative correlations with the proportions of pupils in need of learning-support or psychological assessment, and a weak to moderate positive correlation with school-level attendance rates. Finally, teacher turnover had a moderate correlation (r=.26) with the percentage of unqualified teachers in a school, a weak to moderate correlation with the proportion of pupils in need of learning-support (r=.21), and a weak correlation with the actual proportion of pupil in receipt of learning-support (r=.06), or in need of psychological assessment (r=.07). Thus, teacher turnover was higher in schools with larger proportions of unqualified teachers, and where large proportions of pupils were in need of learning-support, but the relationship was not as strong if the proportion actually receiving learning-support was considered.

Table 8.41: Correlations between pupil-level achievement and various school-level characteristics, Third class

		Pupil Achievement	SES Deprivation score	School-level attendance	% in receipt of learning-support	% in need of learning-support	% in need of psych. assessment	% of pupils =girls	% teacher turnover	% unqualified teachers	% attendance at parent-teacher meetings (3rd)
Pupil Achievement	r	1	-.381	.243	-.200	-.243	-.212	.136	-.135	-.084	.168
	t	-	-7.17	2.87	-3.08	-3.60	3.35	2.09	-1.80	-1.70	1.26
SES Deprivation score	r	-.381	1	-.457	.438	.443	.404	-.150	.185	.211	-.242
	t	-7.17	-	-3.17	3.15	4.57	3.51	-1.16	1.45	1.43	-1.70
School-level attendance	r	.243	-.457	1	-.223	-.340	-.333	-.135	-.147	.031[‡]	.160
	t	2.87	-3.17	-	-1.84	-2.76	-2.55	-1.01	-1.18	0.35	1.04
% in receipt of learning-support	r	-.200	.438	-.223	1	.400	.230	-.162	.057*	.300	-.199
	t	-3.08	3.15	-1.84	-	3.57	1.90	-1.13	0.29	1.92	-1.18
% in need of learning-support	r	-.243	.443	-.340	.400	1	.567	-.080	.207	.146	-.151
	t	-3.60	4.57	-2.76	3.57	-	4.99	-0.81	1.77	1.08	-2.25
% in need of psych. assessment	r	-.212	.404	-.333	.230	.567	1	-.183	.074	.154	-.198
	t	3.35	3.51	-2.55	1.90	4.99		-1.78	0.67	1.21	-2.60
% of pupils =girls	r	.136	-.150	-.135	-.162	-.080	-.183	1	.025[‡]	-.162	.252
	t	2.09	-1.16	-1.01	-1.13	-0.81	-1.78	-	0.18	-1.18	2.34
% teacher turnover	r	-.135	.185	-.147	.057*	.207	.074	.025[‡]	1	.260	.026[‡]
	t	-1.80	1.45	-1.18	0.29	1.77	0.67	0.18	-	1.72	0.18
% unqualified teachers	r	-.084	.211	.031[‡]	.300	.146	.154	-.162	.260	1	-.062*
	t	-1.70	1.43	0.35	1.92	1.08	1.21	-1.18	1.72	-	-0.44
% attendance at parent-teacher meetings (3rd)	r	.168	-.242	.160	-.199	-.151	-.198	.252	.026[‡]	-.062*	1
	t	1.26	-1.70	1.04	-1.18	-2.25	-2.60	2.34	0.18	-0.44	-

All significant at p<.01, unless otherwise indicated

* p=.05

‡ Not significant

9. Learning-Support

This chapter is divided into four main sections. In the first section, some background detail about learning-support teachers who completed the Learning-Support Teacher Questionnaire is provided, including qualifications, experience and participation in in-career development. The next section examines the work of learning-support teachers, and is followed by a section on attitudinal variables relating to the provision of learning-support in the schools in which the learning-support teachers were employed. The final section outlines some of the suggestions made for improvement to the *Learning-Support Guidelines* and learning-support programmes. Only teachers offering learning-support in English were asked to participate in the survey.

Of the 117 learning-support teachers in sampled schools, 110 (94%) returned completed questionnaires. These 110 teachers represented 88 schools (93% of all schools surveyed). Most learning-support teachers worked with pupils across a number of grade levels, making it difficult to separate characteristics of learning-support provision for, say, First class from Sixth class. Therefore, data are not presented separately for each grade level. Unlike the data from the School and Teacher Questionnaires, data from learning-support teachers are unweighted and not linked to pupil achievement.

Teachers' Background

Of those who returned the questionnaire, 80.9% were female and 19.1% were male. Almost all respondents (99.1%) held a learning-support post that had been sanctioned by the Department of Education and Science. Of the 107 who responded to the question, only one respondent (less than 1%) did not hold a sanctioned post.

While the number of years teaching experience ranged from one to 40 years, most respondents had considerable experience, averaging 24 years as a teacher. The average time working as a learning-support teacher was six years, with a range of one to 25 years. Only one respondent was in their first year of teaching, while 90% had at least 10 years experience as a teacher. In contrast, only 17% had at least 10 years experience as a learning-support teacher.

Less than half (46.4%) had completed a recognized course in remedial education or learning-support, while a further 5.5% were completing such a course at the time of the survey. Thus, 48.2% of respondents had not attended nor were they then attending any recognized course in remedial education or learning-support.

In-Career Development

Most respondents had attended in-career development (ICD) on a wide variety of topics (Table 9.1). At least 90% had attended ICD related to oral language, reading comprehension, writing processes, addressing reading difficulties, and the assessment of reading. English grammar was the topic for which respondents were least likely to have experienced ICD, with 45% not having had any ICD on the topic. Of these, only 2% rated ICD on the topic as very useful, with the remaining rating it as of some use (49%) or not much use (49%).

Phonological/phonemic awareness was the topic that the highest proportion of learning-support teachers rated as being very useful (68%), with a further 27% rating it as of some use. Between 53% and 55% rated ICD related to identifying reading difficulties, assessment of reading, and addressing reading difficulties as very useful, with 8% or less rating ICD on these topics as of not much use. Less than one quarter rated ICD on writing purposes and forms, writing processes, children's literature, or assessment of writing as very useful, with between 16% and 28% rating ICD on these topics as of not much use.

Table 9.1: Percentage ratings of the usefulness[1] of various types of ICD

	N	Very Useful	Some Use	Not Much Use	*No ICD*
Phonological/phonemic awareness	107	68.1	26.6	5.3	*12.1*
Identifying reading difficulties	106	54.8	36.6	8.6	*12.3*
Assessment of reading	106	53.6	39.2	7.2	*8.5*
Addressing reading difficulties	106	53.1	38.5	8.3	*9.4*
Oral language	103	46.2	48.4	5.4	*9.7*
Spelling development	106	42.0	50.0	8.0	*17.0*
Reading comprehension	104	38.3	51.1	10.6	*9.6*
Writing purposes & forms	103	24.1	57.5	18.4	*15.5*
Writing processes	104	23.2	61.1	15.8	*8.7*
Children's literature	105	21.4	59.5	19.0	*20.0*
Assessment of writing	103	17.1	54.9	28.0	*20.4*
Knowledge of grammar	103	1.8	49.1	49.1	*44.7*
Other	12	57.1	28.6	14.3	*41.7*

Learning-support teachers were asked how many days ICD they had attended since the start of the school year. They averaged slightly less than a day (0.8) of ICD related to English, 3.8 days on other subject areas, and 4.6 days across all subject areas (Table 9.2). A majority (64%) had not attended any English-related ICD during the school year, 14% had not attended ICD in any other subject area, and 9% had not attended any ICD.

Table 9.2: Mean (SD) number of days ICD related to English, other subject areas, and total number of days attended in the school year

	N	Mean	SD	*No ICD*
English	99	0.8	1.77	*63.6*
Other subject areas	97	3.8	2.34	*14.4*
Total ICD	97	4.6	2.57	*9.3*

The Work of Learning-Support Teachers

A number of learning-support teachers worked in more than one school. However, they were asked to limit their responses to the school in which they received the questionnaire (i.e., the school included in the Literacy Survey) unless otherwise specified.

Caseload

Most respondents (90%) worked in one school only, while 8% worked in two schools and 2% worked in three or four schools (Table 9.3). Given that the majority worked in one school only, it is not surprising that the average number of hours worked per week in the sampled school was close to a full teaching week (23 hours 30 minutes). Those working in one school only averaged almost 25 hours per week as a learning-support teacher, compared to 14 hours and 8 hours 30 minutes for those working in two and three or four schools, respectively. Learning-support teachers' caseloads averaged 30 pupils in the school being surveyed, and 32 pupils in total. Those who worked in a single school dealt with an average of 31 pupils, while those who worked in two or more than two schools dealt with an average of 37 and 44 pupils, respectively. However, as only 11 teachers worked in more than one school, these data should not be generalized beyond the current survey.

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[1] Percentage ratings refer to percentages of those who had experienced ICD on a particular topic.

Table 9.3: Percentage of teachers working in one or more schools, and caseload, in sampled school and in total

	1 (N=99)	2 (N=9)	3/4 (N=2)	Total (N=110)
% Teachers	90.0	8.2	1.8	100
Caseload (SD) in sampled school	30.9 (8.14)	19.6 (8.37)	14.0 (8.48)	29.7 (8.93)
Total caseload (SD)	30.9 (8.14)	36.9 (6.97)	44.0 (8.48)	31.7 (8.33)
Mean (SD) weekly hours	24.7 (1.8)	14.1 (6.95)	8.5 (2.12)	23.5 (4.38)

A majority of learning-support teachers' time was spent providing learning-support in English (88.8%), with a minority of time devoted to Mathematics (10.7%) and to assisting pupils with other subject areas (less than 1%). However, these data may slightly under-represent the proportion of time allocated to subjects other than English. For example, some larger schools may allocate the provision of learning-support in Mathematics to a different teacher. As only those offering learning-support in English were invited to participate in the Literacy Survey, teachers providing support in Mathematics *only* would not be included in the data presented.

Learning-support in English did not typically begin until pupils reached Senior Infants. Junior Infants pupils represented less than 1% of the caseload of learning-support teachers who dealt with Junior classes. For those teaching in Junior and Vertical schools, First class was the grade in which the largest proportion of pupils received support in English (Table 9.4). Amongst those teaching in Senior schools, average caseload tended to be concentrated amongst Second and Third class pupils. Thus, learning-support appears to be targeted at the younger end of the spectrum in Senior and Vertical schools. In Junior schools, a wait of a year or two prior to learning-support being provided (probably in order to assess nascent literacy skills) is the norm.

Table 9.4: Mean percentage of respondents' caseloads by grade level and school type

	Junior		Senior		Vertical	
	N tchrs	Mean (SD)	N tchrs	Mean (SD)	N tchrs	Mean (SD)
Junior Infants	27	0.0	-	-	59	0.5 (2.43)
Senior Infants	26	32.7 (23.81)	-	-	59	16.1 (16.01)
1st	27	43.2 (20.74)	-	-	59	20.8 (16.73)
2nd	19	30.8 (16.55)	9	27.8 (20.44)	60	17.9 (13.94)
3rd	-	-	20	28.0 (21.53)	60	14.6 (12.98)
4th	-	-	21	16.5 (11.05)	60	11.9 (10.69)
5th	-	-	21	20.5 (15.20)	60	10.9 (12.81)
6th	-	-	21	17.8 (16.74)	60	7.8 (11.55)

Percentages for each grade level should be treated separately, and columns not summed, as the number of grades offered by Junior and Senior schools is not uniform. Some Junior schools offer 2nd class, as do some Senior schools.

There was a different pattern of provision for learning-support in Mathematics. No Junior Infants pupils received learning-support in Mathematics from the teachers surveyed, with very few receiving such support in Senior Infants. Teachers working in Junior schools tended to concentrate exclusively on First and Second class pupils when providing support in Mathematics. In Senior and Vertical schools, learning-support in Mathematics was dispersed across grade levels, with no clear pattern of early or late intervention. However, the numbers of pupils to whom learning-support in Mathematics was offered is so small that few conclusions can be drawn. Provision of learning-support for subjects other than English and mathematics was very limited, and numbers were insufficient to provide any breakdown by grade level.

Contact With Parents

The Learning-Support Teacher Questionnaire contained a number of items that examined teachers' contacts with parents. One of these items asked how many times during the current school year the learning-support teacher held sets of individual teacher-parent meetings with the parents of pupils to whom they provided learning-support. Given that most questionnaires were completed during May,

and respondents were asked to include meetings planned to be held before the end of term, this item could be taken as a reasonable indicator of the number of meetings during the entire 2002/2003 school year. A majority (60.9%) of learning-support teachers had organized one set of meetings during the school year, while 24.5% had held two sets of meetings. One in eight (11.8%) held three or more sets of meetings, while 2.7% had not met with parents, nor did they have any meetings planned before the end of the year. Teachers were also asked if they had organised group meetings with the parents of their pupils. Ninety percent had not, while 10% had organised such meetings.

Daily Activities of Learning-Support Teachers

Respondents indicated that most of their time (69%) was spent teaching pupils with learning difficulties in English outside their own classroom (Table 9.5). A further 8% of time was spent on timetable planning, preparation and recording, while 6% of time was spent co-coordinating the identification of pupils with learning difficulties in English. Liaising with class teachers took up just over 5% of time, while activities such as meeting parents, co-coordinating activities relating to the School Plan for English, and teaching pupils with learning difficulties in English in their own classroom each occupied approximately 3% of learning-support teachers' time. Just over 3% of time was spent on 'other' activities, and these included attending meetings with other (school-based and external) personnel, providing learning-support in other subjects, testing pupils, and engaging in early intervention.

Table 9.5: Percentage of respondents' time spent on various English-related activities

	N	Mean %	SD
Teaching pupils with learning difficulties in English *outside their own classroom*	105	69.3	16.56
Timetable planning, preparation and recording	105	8.0	5.20
Coordinating the identification of pupils with learning difficulties *in English*	105	6.0	4.70
Liaising with class teachers to address the needs of their pupils with learning difficulties *in English*	105	5.1	5.26
Meeting / advising / working with parents	105	3.0	2.73
Coordinating activities relating to the School Plan for *English*	105	2.8	2.739
Teaching pupils with learning difficulties in English in their own classroom	105	2.5	8.03
Other	104	3.0	8.09

Learning-support teachers were presented with a list of activities and asked, for First, Third and Sixth classes, what percentage of their instructional time in English was spent on each activity. As shown in Table 9.6, the proportion of time spent engaging pupils in re-reading familiar texts decreased slightly as pupils' advanced (ranging from 18% of time in First class to 12% in Sixth), while the proportion of time spent reading new texts increased with age (from 20% of time in First class to 31% in Sixth).

Table 9.6: Percentage of instructional time in English spent on various activities

	1st			3rd			6th		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Engaging pupils in re-reading familiar texts	73	17.9	9.43	63	15.0	8.69	45	12.3	7.95
Revising and consolidating learning strategies	73	25.7	13.65	63	22.6	9.04	45	23.1	9.51
Teaching new learning strategies	73	27.2	11.49	63	27.7	12.87	45	24.4	13.16
Engaging pupils in reading new texts	73	20.3	9.12	63	25.8	10.3	45	30.9	14.41
Other	73	8.9	12.78	63	9.0	12.12	45	9.3	13.08

Approximately a quarter of time at each of the three grade levels was spent revising and consolidating learning strategies, with a further 24% to 28% (Sixth and Third class, respectively) of time spent teaching new learning strategies. Nine percent of time was spent on 'other' activities, including language development, working on writing and spelling, and phonics.

Respondents were asked about the frequency with which they met class teachers and principals, both formally and informally, to discuss pupils' progress. Most (70%) met informally with class teachers at least once or twice a week, and only 9% indicated that they met informally with teachers once a term (Table 9.7). Informal meetings with principals to discuss pupils' progress were less frequent. Only 36% of respondents met with principals at least once or twice a week, with 23% meeting informally with principals once a term or less frequently. Formal meetings with principals and class teachers to discuss pupils' progress were less frequent. Only 5% of learning-support teachers had formal weekly meetings with class teachers, and less than 2% formally met principals at least once or twice a week. Twenty percent hardly ever had formal meetings with principals or class teachers to discuss pupils' progress. The proportion of missing responses is less than 10% for the items relating to informal meetings, but ranges from 36% to 45% for the items relating to formal meetings. It is possible that at least some of these non-respondents do not organize formal meetings with principals or teachers, and only completed the items relating to informal meetings. Therefore, the proportion who did not formally meet principals or teachers may be considerably higher than suggested in Table 9.10.

Table 9.7: Percentages of respondents indicating various frequencies for meeting class teachers and principals, either formally and informally

	Class teachers		Principal	
	Formal (N=61)	Informal (N=107)	Formal (N=70)	Informal (N=100)
Almost daily	1.6	40.2	1.4	18.0
Once or twice a week	3.3	29.9	0.0	18.0
About once a fortnight	3.3	9.3	14.3	17.0
Once a month	18.0	11.2	20.0	24.0
Once a term	54.1	9.3	44.3	15.0
Hardly ever	19.7	0.0	20.0	8.0

Resources

All of those surveyed indicated that they had access to a suitable room in which to provide learning-support, while 94.5% had a secure place to store records and access to a computer with a CD-ROM. Generally, respondents appeared to feel that their school was adequately served in terms of most material resources. Between two-thirds and three-quarters felt that their work was not hampered by a shortage or inadequacy of textbooks, appropriate library books, workbooks or worksheets, or non-software based resources for teaching phonics and word identification (Table 9.8). However, between 8% and 22% felt that their work was very much impeded by a lack of or inadequate software packages for teaching word identification or phonics (8%), comprehension (19%) and writing (22%).

As noted in the earlier section on the daily activities of learning-support teachers, a small percentage (2.5%) of time was spent providing learning-support to pupils in their own classroom. When asked why they did so, none of the respondents indicated that it was because of lack of an available room. A small number (5.5%) indicated that it was school policy to provide support in the pupil's classroom, while 14.7% did so because of personal preference. In 4.6% of cases, learning-support teachers provided support to pupils in their own classroom because the class teacher requested it. Of the three teachers who offered other reasons, two indicated they did so to increase integration of the pupils receiving learning-support into their class group, while one did so because there was no qualified teacher in a classroom. Some of those offering *reasons* for providing learning-support in the classroom had also previously indicated that they did not spend any time

providing support in classrooms. One possible explanation for this contradiction is that it is something that is rarely done. Thus, some may not have included it in a list of how they *typically* spent their time.

Table 9.8: Percentages of learning-support teachers indicating the extent to which a shortage / inadequacy of various resources impeded the provision of learning-support

	N	No	A little	Very much so
Textbooks	106	72.6	21.7	5.7
Appropriate library books	108	66.7	26.9	6.5
Workbooks/worksheets	108	77.8	18.5	3.7
Software for teaching word ID/phonics	108	64.8	26.9	8.3
Other resources for teaching word ID/phonics	108	66.7	27.8	5.6
Software for teaching comprehension	106	40.6	40.6	18.9
Other resources for teaching comprehension	107	47.7	37.4	15.0
Software for teaching writing	103	45.6	32.0	22.3
Other	8	25.0	0.0	75.0

Those surveyed perceived a number of factors to be impediments to the provision of learning-support in the sampled school. Almost 40% felt that provision was very much impeded by a lack of support from at least some parents, with only 22% indicating that lack of parental support was not an impediment (Table 9.9). Other factors perceived to be major impediments by at least one third of respondents included an excessively large caseload, insufficient in-career development, and a lack of time for preparation and planning. Half also felt that poor quality   in-career development impeded provision of learning-support, either a little or very much. In contrast, almost all (93%) felt that lack of support from principals was not an impediment, with 75% believing that lack of support from teachers did not impede provision.

Table 9.9: Percentages of learning-support teachers indicating the extent to which various factors impeded the provision of learning-support

	N	No	A little	Very much so
Lack of time for preparation or planning	107	36.4	29.0	34.6
Lack of support from principal	110	92.7	6.4	0.9
Lack of support from some all class teachers	109	75.2	23.9	0.9
Lack of support from at least some parents	109	22.0	38.5	39.4
Excessively large caseload	106	28.3	34.9	36.8
Insufficient in-career development	107	34.6	29.9	35.5
Poor quality in-career development	103	50.5	31.1	18.4

Learning-Support in English in the School

Respondents were asked a number of factual and opinion items relating to their experience as a learning-support teacher in the school in which they received the questionnaire. Among the topics covered were teachers' knowledge of the Department of Education and Science's *Learning-Support Guidelines*, consultation between learning-support teachers and other school personnel, and integration between the learning-support programme and other programmes designed to redress educational disadvantage.

Respondents were also asked if the *Learning-Support Guidelines* were useful to them in their role as a learning-support teacher in a designated school. Of the 108 who responded to the item, 34.3% described the *Guidelines* as very useful, while 49.1% described them as somewhat useful. A further 9.3% were unsure of the usefulness of the *Guidelines*, 5.6% thought they were not very useful, and 1.9% described them as not at all useful.

Respondents indicated that learning-support regularly featured on the formal agenda of staff meetings in a minority of schools. Twenty-two percent of learning-support teachers indicated that learning-support in English was either very often or often on the formal agenda at staff meetings, while 53.2% indicated that it sometimes featured. A further 22% indicated that it rarely featured, while 2.8% indicated that learning-support in English was never on the agenda.

A minority (17%) felt that teachers in their schools were very familiar with the *Learning-Support Guidelines*, while just under half (49%) felt that teachers were somewhat familiar with them (Table 9.10). Twenty-three percent reported that teachers were either not really or not at all familiar with the *Guidelines*. In contrast, 90% agreed that the *Guidelines* were being implemented at least to some extent, in their school. Only 6% felt that the *Guidelines* were not really being implemented, with none feeling that they were not at all implemented.

Table 9.10: Percentages of respondents indicating the extent to which they felt that their schools' teachers were familiar with the *Learning-Support Guidelines* and that the Guidelines were being implemented

	N	Very much so	Somewhat	Unsure	Not really	Not at all
Teachers sufficiently familiar with LSG, and whole-school approaches learning difficulties in reading?	109	16.5	48.6	11.9	17.4	5.5
Are LSG, as they relate to provision for English, being implemented in this school?	109	45.0	45.0	4.6	5.5	0.0

A number of items in the questionnaire examined learning-support teachers' interactions with other staff in the school. Seventeen percent indicated a high level of consultation with the HSCL coordinator to identify how parents of pupils in receipt of learning-support could facilitate the attainment of their child's learning targets, while a further 37% indicated that there was some consultation (Table 9.11). However, 29% indicated that there was not a lot of consultation, and 11% indicated there was no consultation at all.

Responses were more positive regarding the extent of consultation between the learning-support teacher and HSCL coordinator in order to identify how parents with literacy difficulties could be encouraged to participate in programmes designed to improve their literacy skills. Thirty-one percent felt very much so that there was such consultation, while 40% felt there was at least some consultation. Less than 10% felt that there was no consultation at all. Responses also indicated that reasonable levels of consultation were the norm rather than the exception. When asked if there was consultation with class teachers so that extra resources were directed towards meeting the needs of pupils with learning difficulties in English, 31% agreed that this was very much the case. A further 40% felt that this was somewhat the case, while 17% felt that such consultation either happened not a lot or not at all.

Table 9.11: Respondents' perceptions of the degree of consultation with HSCL[*] coordinators and class teachers

Is there consultation with …	N	Very much so	Somewhat	Unsure	Not a lot	Not at all
HSCL co-ordinator to identify how your pupils' parents can facilitate the attainment of their child's learning targets	107	17.8	37.4	4.7	29.0	11.2
HSCL co-ordinator to encourage parents with literacy difficulties to participate in programmes to improve literacy skills	107	30.8	40.2	10.3	10.3	8.4
class teachers to direct extra resources towards meeting the needs of pupils with learning difficulties in English	102	31.4	40.2	11.8	8.8	7.8

[*] Two learning-support teachers based in schools with no HSCL post are excluded from these analyses

Many designated schools benefit from more than one programme designed to redress educational disadvantage. For example, many schools in the Literacy Survey are involved in schemes such as Giving Children an Even Break, Breaking the Cycle, and the School Completion Programme. Overall, only 8.3% of respondents indicated that their school was not involved in any other programmes. Of the remainder, 11.1% felt that their schools' learning-support programme in English was very integrated with other programmes, while 32.3% felt it was somewhat integrated. Almost one quarter (22.2%) were unsure of the degree of integration, 16.2% felt it was not very integrated, and 18.2% felt that the learning-support programme was not at all integrated with other programmes.

Learning-support teachers were also asked about the coordination between classroom and learning-support activities. Fifteen percent strongly agreed that there was a high level of coordination between class reading programmes and learning-support programmes, while 44% agreed that this was so (Table 9.12). However, 31% disagreed and 3% strongly disagreed that this was the case. When asked whether responsibility for the progress of a pupil receiving learning-support was shared jointly by the class and learning-support teachers, responses were more positive. Eighty-nine percent of respondents either agreed or strongly agreed that this was true, with less than 1% strongly disagreeing with the statement. Almost three-quarters (72%) agreed or strongly agreed that the class teacher was primarily responsible for the reading programmes of pupils receiving learning-support, while 14% disagreed or strongly disagreed. Finally, 22% of learning-support teachers either disagreed or strongly disagreed that learning-support was meeting the needs of pupils with learning problems in English reading. Twelve percent strongly agreed with the statement, and a further 50% agreed.

Table 9.12: Respondents' perceptions of the co-ordination between class and learning-support activities, and of the efficacy of learning-support

	N	Strongly agree	Agree	Unsure	Disagree	Strongly disagree
High level of coordination between class reading programmes and LS programmes	108	14.8	44.4	6.5	31.5	2.8
Responsibility for the progress of a pupil receiving LS is shared jointly by the class and LS teachers	109	28.4	60.6	4.6	5.5	.9
The class teacher is primarily responsible for the reading programmes of pupils receiving LS	107	19.6	52.3	14.0	11.2	2.8
LS is meeting the needs of pupils with learning problems in English reading	109	11.9	50.5	15.6	17.4	4.6

Enhancing Learning-Support

Learning-support teachers were invited to respond to three questions concerning how the provision of learning-support might be enhanced. The first question asked how the *Learning-Support Guidelines* might be modified to better meet the needs of teachers providing support in English in designated disadvantaged schools. The two remaining questions were open-ended, and asked for suggestions for enhancing the effectiveness of learning-support programmes in English in schools designated as disadvantaged, and in primary schools in general.

Modifications to the Learning-Support Guidelines

Respondents were asked to identify how, if at all, the *Learning-Support Guidelines* should be modified to better meet the needs of teachers in designated disadvantaged schools. As shown in Table 9.13, half of those surveyed believed that collaborating with class teachers, and consulting and collaborating with parents were areas of the *Guidelines* that needed modification. Just under half (46%) thought that guidelines relating to the identification and selection of pupils for learning-

support could be improved, while 32% thought that the development of a school policy on learning-support needed modification.

Table 9.13: Percentages of respondents indicating various ways in which they felt that the
***Learning-Support Guidelines* should be modified**

	N	%
Identification / selection of pupils for learning-support	110	46.4
Development of a school policy on learning-support within the context of the whole school plan	110	31.8
Collaboration with class teacher(s)	110	50.9
Consulting and collaborating with parents	110	50.9
Other	110	20.0

A further 20% made other suggestions. Six respondents raised issues relating to administration and record-keeping, while four indicated that a cut-off point of children at or below the 10th percentile was too low. Two respondents wanted more information on early intervention or preventative strategies, and three referred to large caseloads. Other modifications suggested included more emphasis on acquiring oral competence, information on other bodies which support children with learning difficulties, a comment on how lack of support from NEPS mitigates against achieving other learning-support goals, and the inclusion of strategies for dealing with specific difficulties (particularly as many learning-support teachers had not completed a course in learning-support).

Enhancing Provision in Designated Schools

In response to an open-end question, 83 learning-support teachers offered a total of 160 suggestions for enhancing the effectiveness of learning-support programmes in English in schools designated as disadvantaged. The suggestions are summarised in Table 9.14.

Seventeen per cent of teachers who responded to the survey referred to a need for more human resources. Their suggestions included the appointment of additional learning-support teachers for English, speech and language therapists, resource teachers, full-time (non-shared) learning-support teachers for all designated schools, and additional staff to deal with administration, so that learning-support teachers could be released to teach.

Just over 16% of those surveyed provided suggestions pertaining to in-career development (ICD). Twelve suggestions related to ICD for learning-support teachers, including more frequent ICD, more intensive ICD on specific strategies or programmes (e.g., Reading Recovery), faster access to training courses for newly appointed learning-support teachers, and cluster meetings for learning-support teachers. Four raised issues relating to ICD for class teachers, suggesting that all teachers should have ICD on the *Guidelines*, and ICD on reading and learning disabilities. One respondent wanted more ICD related to teaching low-achieving children (but did not specify if the ICD should be targeted at learning-support teachers or class teachers). Finally, one proposed that those who completed the recognised course in learning-support should receive additional payment.

The allocation of time during the school day was raised by 16% of teachers, with issues including difficulties in meeting class teachers, and the need for more time for assessing, monitoring and record keeping. One teacher suggested that a sample timetable for learning-support teachers was needed, as in-service courses sometimes offered contradictory advice on timetabling. Almost 11% of teachers referred to the criteria for selecting pupils for learning-support services, with almost all suggesting that consideration should be given to pupils at ranks higher than the 10th percentile. A similar proportion offered suggestions relating to home-school relations, typically calling for the greater involvement of parents in their children's literacy development. Additional material resources were mentioned by 9% of teachers, while 6% wanted schemes or programmes such as Reading Recovery, Breaking the Cycle and Early Start extended.

Six percent wanted increased access to psychological services, while a further 6% raised issues relating to caseload size for learning-support teachers. Small numbers of teachers provided suggestions relating to the organisation of learning-support in schools and learning-support in Mathematics. Those commenting on the organisation of learning-support suggested that smaller groups (1:1 or 2:1) would be more effective than 4:1 or larger, while those who commented on the provision of learning-support in mathematics suggested that additional learning-support teachers be provided to address learning difficulties in mathematics in their schools. Suggestions relating to teaching/assessment within learning-support settings included a stronger language focus, more emphasis on paired reading, and that teachers write short notes on children's progress on a daily basis. Numerous other suggestions were made, including the need to improve the attendance of some pupils who were in receipt of learning-support, further comments on the *Guidelines*, the participation of Traveller children in learning-support classes, and the feminisation of the teaching profession.

Table 9.14: Respondents suggestions for enhancing the effectiveness of learning-support programmes in designated disadvantaged schools

Category	N Teachers	% Teachers	N Comments	% Comments
Human Resources	19	17.3	28	17.5
In-career Development	18	16.4	18	11.3
Allocation of LS teacher's time	17	15.5	18	11.3
Criteria for selecting pupils	12	10.9	14	8.8
Home-school links	12	10.9	14	8.8
Material resources	10	9.1	10	6.3
Intervention programmes	7	6.4	8	5.0
Psychological services	7	6.4	7	4.4
Caseload size	7	6.4	8	5.0
Organisation of LS	5	4.5	5	3.1
LS in mathematics	4	3.6	4	2.5
Teaching/Assessment	4	3.6	4	2.5
Other	22	20.0	22	13.8
Totals	(110)		160	100.0

Enhancing Provision in All Primary Schools

Respondents were also invited to offer suggestions for enhancing the effectiveness of learning-support programmes in English in all schools (i.e., both designated and non-designated). Fifty-one respondents offered 114 suggestions, many of which overlapped with those outlined in the previous section, and, therefore, are not detailed here. Amongst the issues that were raised again, ICD, additional material and human resources, allocation of learning-support teachers' time (including time for meeting class teachers), selection of pupils for learning-support, and increased access to psychological services were mentioned by at least 5% of teachers surveyed.

Of the 18% who offered suggestions about ICD (the topic most commonly raised), almost half wanted it on an ongoing basis, with others highlighting the difficulties that new learning-support teachers have in gaining access to courses. Other suggestions included whole-school ICD in the area of learning-support, and training for all learning-support teachers on the strategies taught in Reading Recovery. Suggestions for improved material resources included improved school/class libraries, more supplementary books for reading and updated reading and other materials. Some suggested that input from class teachers should supplement test data when selecting pupils for learning-support teaching. Finally, 5% raised issues about assessment tools, including availability, differences between MICRA-T and DPRT results, and a need for a standardised test for Infants classes.

10. Interviews with Teachers and Parents

As part of the Literacy Survey, a total of six group interviews was conducted with groups of parents, principals and teachers. The purpose of the interviews was to allow each of these stakeholder groups a voice in the report, and to elaborate on or clarify issues raised in the quantitative element of the survey. Interviews were held in two locations: a school in a Dublin suburb, and a school in a country town. This chapter describes how the interviews were organised and highlights some of the issues raised by participants. Although each group (whether parents, principals or teachers) was interviewed separately in the two locations, responses are collated and presented together. The first part of the chapter outlines how the interviews were carried out, including selection of locations and participants, interview structure, and a description of the participants. The second part is divided into 14 sections, and concerns the views expressed by participants.

Participants' views on parent-school interaction are examined in the first of these sections, followed by a section on the availability and efficacy of pre-schools, and another on children's reading activities. The fourth and fifth sections examine the achievability of National Anti-Poverty Strategy (NAPS) reading targets, and school-based reading targets, while the sixth section examines the role of reading in the 1999 *Primary School English Curriculum*. This is followed by sections on the resources available in designated schools for teaching reading, staffing, and teacher training (both pre-service and in-service). Next are sections covering within-school assessment of reading and psychological assessments, followed by an examination of learning-support provision and the integration of various personnel and schemes within the school. The final section of the chapter outlines the many suggestions offered by those who participated.

Method

All three sets of interviewees (parents, principals and teachers) were interviewed in groups rather than individually, to allow for contact with a larger number of people than would be possible with one-to-one interviews. Group size was restricted to allow for reasonable participation from all present. A further, and very important, reason for using group interviews was that the format was perceived to be a less threatening environment for parents than a one-to-one interview.

Different semi-structured interviews were designed for each type of interviewee, although there was a considerable degree of overlap in the questions asked of principals and teachers. At the start of each session, participants were given some background details about the Literacy Survey, told of the purpose of the meeting, thanked for their participation and reassured that all their responses would be treated as confidential. In each instance, three interviewers from the Educational Research Centre were present. Each took turns in asking questions about a topic, while the two not asking questions took notes of responses, or interjected as appropriate. Interviews were not tape-recorded, as it might have inhibited some of those present. The interviews largely followed a pre-determined order. However, in cases where responses to one set of questions appeared linked to another set, the pre-determined order was set aside to create a more natural 'flow'.

Selection of Locations and Interviewees

There were two main reasons for selecting an urban and a rural location for interviews. Firstly, it seemed likely that the experiences of those in urban and rural designated schools might differ, in terms of the nature and extent of interventions provided, the extent of disadvantage, and access to non-school-based resources. Secondly, it was felt that selection of a rural location might help to counterbalance the largely urban nature of designated disadvantaged schools (and of those schools selected to participate in the survey).

Location

There were two selection criteria for locations. Firstly, the area had to contain a number of designated disadvantaged schools in close proximity. This effectively excluded most rural areas, as few contained a number of designated schools that were close to each other. Secondly, the schools in the area should represent a mixture of types of school. Thus, areas that had Junior, Senior and vertical schools, single-sex and mixed sex schools, and Gaelscoileanna were prioritized.

Based on these criteria, a Dublin location with six designated schools, all within a mile of each other, was selected. It was not possible to find a number of designated schools in a rural area (defined as an area with a population of less than 3,000). Therefore, a provincial town was selected. There were three designated schools in the town, and one other designated school approximately two miles outside the town, in a quite rural location. Hereafter, the three schools in the provincial town and the one rural school are referred to as 'country' schools.

Interviewees

Principals from each of the selected schools were invited to participate in a group interview with other principals in the area. All agreed to take part. They were also asked to nominate two teachers from their school to take part in a group interview for teachers. The selection of teachers was left to the discretion of principals, but they were advised that at least one of the teachers should be a class teacher, and that preference should be given to teachers who expressed an interest in taking part. Also, as information about other participants became known, this was used to advise principals about the composition of the group. For example, if two learning-support teachers had already agreed to take part, other principals were told this, and encouraged to select a teacher other than someone offering learning-support, in order to allow representation from a diversity of teaching staff.

As part of the parent interviews centred on parent-school relations, attendance was limited to parents of children in one school in the area. In each area, the most centrally located school was selected as a base school. All interviews were carried out in the school, and only parents whose children attended the base school were invited to participate. In practice, however, many of the parents who attended also had children attending other schools. Two methods were used to invite parents to take part. Firstly, a poster inviting parents to take part was sent to each base school, and displayed in the Parents' Room. Secondly, the HSCL co-ordinator invited a number of parents to attend (and, in some cases, organised transport so that they could do so). Co-ordinators were advised that a cross-section of parents would provide more useful information than would a group composed only of those whose children had good literacy skills, and no behavioural or learning difficulties.

Participants

Ten principals were interviewed (six in the urban area and four in the country location), as were 26 teachers (10 country and 16 urban). A mixture of teaching posts and of teaching experience was represented. Half of those present were class teachers, ranging from Infants to Sixth class teachers. Also present were learning-support teachers, HSCL co-ordinators, Resource teachers, a former Resource Teacher for Travellers and a Special Needs Assistant. In total, 24 parents (two of whom were fathers) were interviewed, split evenly between the country and urban areas. Some of the urban parents had worked, or were working on a voluntary basis in the school, while others had children with special needs. In the country location, a number of parents had taken time from their adult literacy class to attend the interview. Although a significant minority of pupils in the country school were from the Traveller community, only one parent from the community attended the interview.

Views of Those Interviewed

In this section, the views of those interviewed are presented. Interview data are presented by topic, rather than by group interviewed. Certain topics were not covered in all interviews (e.g., parents were not asked whether NAPS targets for reading were achievable). Where the views from the urban and country locations are similar, location is not mentioned.

Parent-School Interaction

Parents in both areas reported that they met teachers once or twice a year at formal parent-teacher meetings. Aside from that, they could meet teachers as little or as often as they wanted. Urban parents with younger children indicated that they spoke more frequently with teachers, because they were more likely to bring a young child to the classroom rather than just to the school gate. They also said teachers occasionally initiated contact if there was a problem, and most said that there was an open-door policy in the school. This meant that *most* parents would be comfortable enough to call into the school if they felt there was a problem. In contrast, the country parents appeared less comfortable with meeting class teachers. Some of them felt that the tone of parent-teacher contact depended heavily on how well the child and teacher got along, rather than on the parents themselves.

Teaching staff viewed themselves as approachable, with urban teachers, in particular, emphasising their open-door policy towards parents. Staff in the country location reported greater difficulties in establishing parental involvement, indicating that turnout at parent-teacher meetings was poor. They felt that parents' own experiences of school inhibited parental involvement. Moreover, country principals discussed how the sense that parents were watching one another made many parents wary of participation in school-based activities. They felt that staff had to be careful not to create tensions between Traveller and settled parents, as socially disadvantaged settled parents were unhappy about extra funding allocated to pupils from the Traveller community.

Many of the parents present at the urban meeting had attended courses organised by the school, including a Family Literacy course, activities organised by the Early Start programme, a paired reading programme, and self-development courses covering a variety of topics. Others had worked as classroom volunteers, helping younger pupils to read. A large proportion of parents attending the country session also indicated that they had attended school-run courses, including adult literacy and reading classes, although none had worked as a classroom volunteer. Subsequent conversation with the HSCL co-ordinator revealed that the school no longer offered such courses, as the Society of St Vincent de Paul organized similar courses, and paid attendees a small amount. Unsurprisingly, parents had generally chosen the paid courses over the school-based courses. In both schools, parents appeared to have developed a strong rapport with the HSCL co-ordinator. Many explained that prior to meeting the co-ordinator, they had little contact with school staff. The co-ordinator had helped them to become more comfortable with coming to the school, dealing with teachers (either directly or indirectly, through the HSCL co-ordinator), using the parents' room and, generally, becoming more involved in their child's education.

Parents' conversations with teachers typically revolved around how their child was getting on in class. Most felt that they had a reasonable understanding of how their child was faring at reading, although country parents indicated that this was because they had to check and sign their child's homework. Many urban parents felt that, by talking to teachers, they had learned new techniques for improving their child's reading. These included paired reading, using flashcards, bringing reading into everyday life (including pointing out signs when shopping), and boosting children's confidence and self-esteem, even when they were not doing as well as expected. A few felt that constant praising had given their child confidence to overcome their reading difficulties.

Teaching staff saw benefits that could accrue from an increase in home-school interaction. They felt that parents who were uncomfortable in a school environment could be problematic from a teacher's viewpoint. This was because it was harder to get such parents to see their own role in their child's education, or because their insecurity could make them hostile towards teachers. Parents with limited educational experiences and poor literacy skills often felt that they either *had* nothing to contribute or *needed* to contribute nothing to their child's education. The establishment of a comfortable relationship between the parent and the school was one of the ways through which such parents could be shown that they had a role to play in how and what their child learned.

Staff in both areas referred to numerous measures that were successful in developing parental involvement. However, all referred to the problem of attracting a subgroup of parents whose children would most benefit from parental involvement in any school-based or school-run activity, but who were least likely to participate. Urban teachers also referred to the increased difficulty of

involving parents since the advent of the economic boom. Parents who would traditionally have been unemployed were now in the labour force, and therefore unable to visit the school during the day. There was agreement that parental interest in programme-based activities such as paired reading was hard to maintain. Some schools tried a week on/week off, or every second term schedule for programmes involving parents, and found that this maintained participation rates better than a programme that needed a weekly commitment. That aside, efforts to promote parental participation in their child's education were positively perceived by teachers. A number of paired reading programmes were cited as having successfully managed to increase parental involvement in their children's reading. However, some of the urban teachers indicated that paired reading programmes could sometimes be very stressful for parents with limited literacy levels.

A number of other programmes were mentioned. The country principals described the HSCL scheme as having 'worked wonders' in terms of parental involvement. They viewed the HSCL co-ordinator as a bridge between the school and the parents, and felt that the co-ordinator was instrumental in creating and maintaining good parent-school links. Some of the urban teachers and principals discussed a Family Literacy programme, run in one of the schools. The programme involved a small targeted group of parents and their children who engaged in literacy-based activities as part of a broader theme. Staff felt that the programme had been very successful, both in terms of encouraging parental involvement and in improving pupils' reading levels and attitudes towards reading. A few of the parents interviewed had attended the course, and shared the staff's positive evaluation, indicating that they not only felt more comfortable dealing with school staff, but that they had a better idea of how to foster reading skills in their children.

Urban staff mentioned three other programmes that had led to noticeably higher parental involvement: Reading Recovery, PAL (Parent-Assisted Learning) and Early Start. As part of the Reading Recovery programme, parents watch their children being helped to read by a Reading Recovery tutor. Some teachers felt that because of this, parents began to realise that their children could be taught to read, and, temporarily at least, adopted some of the methods used by the tutor. The PAL programme, whereby parents worked in the school with pupils with literacy difficulties, was also praised. Finally, Early Start was praised as a programme that had managed to attract and maintain significant parent participation throughout the programme. Some teachers felt that the benefits of Early Start (in terms of parental involvement) lasted into primary school, as parents were more aware of buying toys with educational value, and were more comfortable visiting schools.

Advice Offered to Parents by Schools

Parents in the urban area listed a number of ways in which the school provided advice on how to help children read, including meetings about reading for parents of Junior Infants pupils, encouraging both parent and child to join the library, and a pre-school pack for parents. The latter included guidance on what a Junior Infants child was expected to know before they started school, and a set of colouring and very simple picture/reading books. Some had attended a Parenting Course, and found it to be helpful. Country parents were less positive. Some parents of older children stated that the school gave no advice to parents before their child enrolled, while others indicated that there was a half hour meeting for new parents. None who had attended the meeting had spoken to the class teacher, and none felt that they had a reasonable idea of how to prepare their child for school. In contrast, country teachers perceived parents as unwilling to attend parent-teacher meetings, even when it concerned enrolling their child in a school. All parents felt that more information prior to children starting school would be beneficial, and that parents did not fully understand what their child should be able to do, how they could better prepare them for school, and what sort of things they would be doing in school. Consequently, parents were not as effective as they could be.

Experiences of Pre-Schools

Although the Early Start pre-school programme was available only in the urban area, most parents had experience of some form of pre-school or Montessori. Parents found pre-school to be very beneficial, helping not only the child, but giving them a better idea of what to do with their children. Urban parents felt that the significant parental involvement required by Early Start meant that parents interacted more with other parents, and were no longer afraid to approach the school or teachers.

They described how children were taught colour names and basic spelling. However, many felt the main benefits of pre-school were the understanding it gave parents of what children needed to know, and the broader concepts it taught children (concentrating in class and co-operating with a group). Teachers in the urban location acknowledged that the benefits of Early Start might gradually fade away, as parents and children were not perceived to be receiving adequate levels of support upon completion of the programme. However, others noted that the effects of such programmes are often long-term, and that short-term decreases in reading or mathematical achievement, as measured by a standardised, group administered test, may mask the real value of a programme.

Although the country teachers did not have experience of Early Start, many of their pupils had attended a pre-school for Travellers, a Naoínra, or one of many private pre-schools. Generally, they viewed pre-school programmes as very beneficial, particularly in relation to language development. There was agreement that they contributed to children's ability to adapt to the requirements of the Junior Infants classroom (e.g., turn-taking and sitting still for a period of time). Pre-school was also perceived to improve children's readiness to read, as attendees were typically exposed to print materials and a broader range of oral language. Some had found that Infants pupils did not know very basic words, such as the word for a jumper or shirt, and believed that pre-school attendance remedied such basic deficiencies in vocabulary.

Teachers in both locations discussed how pre-school availability affected pupil age in Junior Infants. Urban teachers felt that the Early Start requirement that attendees be 3 years old meant that many 'young' 4 year olds (i.e., those born in September or October) started school as soon as they completed Early Start or turned 4. In contrast, country teachers felt that the lack of a state-sponsored pre-school meant that many parents who could not afford private pre-school sent their children to school as soon as it was legal to do so. Despite different causes for their concerns, both groups agreed that very young pupils were generally at a disadvantage relative to their older classmates.

Children and Reading

Most parents had at least one child who enjoyed leisure reading. In both areas, children borrowed books from the local library, although many parents thought that the library was too far for the children to use it as often as they should. That aside, parents said that their children enjoyed using the library, and that the children's sections were good. Children also borrowed books from schools' own libraries. However, parents felt that going to the public library was more interesting for children. In the urban location, a mobile library van served parts of the area, and was popular among pupils and their parents. One parent commented that the children felt very grown up when they were allowed into the van, library card in hand, to choose books. Both teachers and parents in the urban area felt that public libraries were a good way to promote reading amongst children, suggesting that a greater number of public libraries and mobile libraries would be beneficial.

Most parents read books to their children, but ceased to do so at or before Second class. Urban parents indicated that if a child was read to from a very early age, then the child would enjoy the experience, and encourage or nag the parent to maintain the practice. Thus, on occasions when parents did not feel motivated to read aloud, they were almost forced to do so. At least some of the parents in both areas had participated in a shared reading scheme, and found it to be beneficial. In contrast, very few parents read or discussed newspapers with children, even if they were regular newspaper readers themselves. Those in the urban area felt that material in newspapers was either too depressing or simply unsuitable for children. Interestingly, pupils in Senior classes in the same school brought newspaper articles into school and discussed them as part of their classwork.

Dealing with Problem Readers

Most parents had difficulty at some point in getting one of their children to read. Country parents blamed distractions such as television, Playstation and sport, perceived as more interesting than reading, especially by boys. Few suggestions were offered as to what could be done, although one suggested that if books were picked by pupils instead of teachers, they might be more likely to read them. In contrast, urban parents felt that the simplest way to get children reading was to buy them books and materials linked to their interests. Parents felt that once their child got into the habit of

reading about such things, the practice of reading was more likely to carry over into other areas of interest. Some of the urban parents had children who were dyslexic, and they advised other parents with problems readers to keep calm, not get frustrated, continue helping the child to read, and ensure that the child received plenty of encouragement and praise.

After-School Clubs

The contrast between the country and urban areas was most evident when after-school activities are compared. The urban area had multiple after-school activities, including a Homework Club, a Breakfast Club, and clubs or activities involving Arts, Drama, German, and Music. Parents felt that their children enjoyed the various activities. The Drama Club, in particular, was praised for the effects it had on the confidence of shy children. Some parents also felt that it improved reading. In contrast, the country area had one Homework Club, set up to assist pupils whose parents did not have sufficient literacy levels to help them with homework. One parent thought that it helped children, while all other parents present disagreed. They said that homework was not checked, and the club was described as being like a playgroup. Some also stated that those running it had very poor literacy levels, and were unable to help the children. Interestingly, a similar point was raised by urban principals, who felt that the literacy skills of those employed in some pre-school programmes was less than what would be hoped for.

Summer Activities

Urban parents indicated that a number of summer clubs operated in the area, although most were aimed at children in the senior primary classes. Some parents' children had attended a Literacy Through the Arts summer programme, which was praised as helping children's reading skills without them realising that it was 'work'. Country parents indicated that the only summer activities organised for children were sports-oriented, and there was general agreement that children read less during summer holidays. This did not appear to be a cause for concern, with one parent suggesting that children needed a break from being cooped up in a classroom.

Children's Attitudes Towards Reading

Country parents felt that children's attitudes towards reading became less positive as they grew older, and that they read less for fun. They thought that older children had more distractions, such as Playstations, and read less because they were given too much homework in post-primary school. In contrast, urban parents indicated that children who initially enjoyed reading tended to continue to enjoy it as they got older. They criticised post-primary schools for not giving pupils enough homework, and said that homework was often completed during free classes. As a result, their children were not in the habit of reading schoolwork at home. They did not notice any major changes in attitudes associated with age, nor did they perceive any significant gender differences. They felt that Homework Clubs were useful ways of fostering good reading habits, and thought that if reading was assigned as homework, pupils were also more likely to read at home. Activities such as the Write-a-Book scheme, the Readathon, and the school's Book Week were all praised as helping to make reading appealing to children.

Achievability of NAPS Target for Reading

Teachers and principals were asked if they thought that the NAPS target of halving the number of pupils in designated schools with serious literacy difficulties by 2006 was achievable. Urban principals felt that the target was achievable if adequate levels of resources continued. They felt that a language support unit and an effective language programme were vital, as pupils needed to be able to engage verbally before they could learn to read. In contrast, both groups of teachers and the principals in the country area thought it unlikely that the target would be achieved. They felt that the extent to which the target was reached was heavily dependent on the interventions put in place, and that current provision was insufficient to meet the target. Many emphasized the very disadvantaged nature of their enrolment and pointed out that they had large numbers of pupils with learning difficulties. Without adequate levels of additional support, many of their pupils would continue to have literacy difficulties, and the NAPS target was unlikely to be reached. Both groups in the urban location felt that the introduction of smaller class sizes in designated disadvantaged schools would

make the target more achievable, with principals suggesting that smaller class sizes would help to redress what were described as the serious oral language deficits found amongst many of their pupils.

Those from the country area felt strongly that their pupils were not receiving sufficient additional support, highlighting the lack of adequate pre-school programmes, and of Educational Welfare Officers, the delay in pupil assessment and in the subsequent assigning of resource teachers. Country principals indicated that the town's School Attendance Committee (including school staff and a Garda Juvenile Liaison Officer) had been disbanded, as it was to be replaced by an as yet unappointed Educational Welfare Officer. Consequently, they had changed from what was described as a well-run, locally-based, monitoring system for non-attendance to a system whereby form-filling increased but no actions were taken. Country principals and teachers pointed out that the lack of a state-sponsored programme such as Early Start meant that parents who could not afford private pre-school or day-care (a majority of their parents) sent their children to school at a very early age. The NAPS target was not seen to be achievable until such additional supports were in place. The latter point was echoed somewhat by urban principals, who felt that the Early Start programme helped to improve attendees' oral language skills, which they perceived to be essential for later literacy skills.

Both the urban principals and the country teachers interviewed referred to the importance of the home background in developing literacy. Whatever efforts were made by schools and teachers would necessarily be constrained by the extent of parental support. Therefore, urban principals felt that any initiatives planned in association with the NAPS target should involve parents.

Finally, principals and teachers in the urban location discussed how literacy was assessed. They thought that the methods and measures used at least partially dictated the extent of any difficulties found. As an example of this, some mentioned how teachers often found significant differences between the same pupil's test scores on the MICRA-T and DPRT. Principals whose schools had participated in Breaking the Cycle were surprised to have heard informally from members of the Inspectorate that the evaluation of the scheme had found no positive effect. They felt it had led to significant improvement in their schools, both in terms of test results and in teacher evaluations of pupil performance.

Within-School Reading Targets

Principals and teachers were asked about targets for reading, and the extent to which they prioritised reading achievement. Principals were asked about reading targets in their school, while teachers were asked about targets for pupils and for their class.

School-Level Targets

Schools did not generally have school-wide targets for reading. Instead, individual pupils had targets set for them by their class or learning-support teacher. Achievement was monitored by teachers, and additional time allocated to those who were below average. Country principals said that their school's target was to help each child to read at a level appropriate to their age and ability. They felt that their job was to keep teachers informed about new techniques and methodologies, thus enabling them to do their job to the best of their ability. They felt that teachers in general, and learning-support teachers in particular, needed to be familiar with a broad range of programmes in order to choose the approach most appropriate for individual pupils. Facilitating teachers in teaching to the best of their ability was perceived to be more important than any school-wide prescriptive standards.

Evaluating Effectiveness

Principals were asked how they evaluated the effectiveness of their schools' approaches to literacy. Generally, reviews (if they existed at all) tended to be informal. For example, one urban principal indicated that feedback from parents on how their children were performing on a particular programme was how the school reviewed the effectiveness of its strategy. Another indicated that teachers had temporarily stopped using pupil checklists, to create more time for the actual teaching of reading. The effect of this change on pupil achievement would be reviewed at the end of the school year. Evaluation of the effectiveness of the approach adopted in the school was by discussion amongst staff. In contrast, teachers in another urban school reviewed pupil targets on a fortnightly

basis, using an assessment framework associated with the Sunny Streets reading scheme. This had been agreed amongst the principal and class teachers as a suitable way in which to monitor achievement. It was not reflected in any written policy statement.

Country schools did not have any formal, documented approach to evaluating the effectiveness of approaches adopted. Effectiveness was typically assessed through a combination of test results and staff discussion. One principal felt that teachers were generally in the best position to see if an approach is working or not. Consequently, evaluation based on teacher opinion, although not highly regarded by some, was very important. One principal was heavily critical of the Department of Education and Science, who were described as requiring a very paper-based approach. Schools were perceived as progressive if they had a formal *written* set of school goals and policies, irrespective of whether or not what was written had any effect on teaching practice.

Class-Level Targets

All indicated that learning-support teachers had Individual Learning Programmes, with very specific targets, for those pupils with whom they dealt. Class teachers tended not to have specific targets for pupils. Instead, they had broader aims and objectives, such as those specified in the School Plan or on pupil profiles. Generally, they tried to ensure that pupils read at an age-appropriate level.

Priority Assigned to Reading

Initially, all indicated that reading was the main priority in their schools. However, upon reflection, all agreed that developing literacy skills and oral language were the joint top priorities. The consensus was that it was very difficult to develop literacy skills in pupils with limited vocabulary. Pupils who could read spellings but not understand word *meanings* became frustrated with reading. Therefore, it was important to expand vocabularies so that pupils understood what they were reading.

Teachers felt that pupils frequently came from homes where there was little spoken interaction, and that their time was spent watching television or using a Playstation game. Parents sometimes had limited vocabularies, and were not confident in their own use of language, making it difficult for them to provide their child with adequate verbal interaction. Some teachers said that although children were exposed to a broader vocabulary through television, the lack of any interactive element meant that they did not understand the meaning of the words they heard. Also, the language they heard in their local area was often quite different to that in their school textbooks. For example, each area had its own local slang, as well as accent. Thus, unfamiliar words coupled with a different pronunciation style made it difficult for pupils to recognise and to spell words.

Time Allocated to Reading Lessons

All school staff interviewed indicated that they tried to allocate as much time as possible to reading. However, no school had a policy on how much time should be spent teaching reading. Some indicated that reading permeated all subject areas, and that it was therefore not possible to quantify the amount of time pupils spent reading. Others stated that a minority of pupils' basic literacy skills were so poor that they needed to be taught nothing but reading. However, this was not feasible as schools were required to cover all areas of the curriculum. Some class teachers believed that the most recent version of the curriculum allocated less time to teaching reading, as new subjects had to be covered, but no extra time was allocated to do so. Consequently, even with the discretionary time available, time for reading lessons must necessarily be reduced. Most teachers had not done so, but worried that other subjects were not receiving sufficient attention.

Reading and the English Curriculum

Most teachers expressed difficulty with some aspects of the curriculum. In particular, country teachers were highly critical of the curriculum, and felt there were too many areas to be covered. They described the *Guidelines* as vague and wordy, with far too much material, and not enough practical information. One teacher commented that, given the total volume of material involved, teachers could hardly be expected to carry it around for use as a reference guide. Others stated that they did not really understand what was required in English lessons, to the extent that, at the end of a lesson, they were sometimes unsure if they had achieved the relevant curricular goals. The 'strands'

in the English curriculum were cited as not being very helpful. Teachers in both areas felt that the curriculum was directed at middle class and middle ability pupils, with urban teachers criticising a perceived assumption that pupils with difficulties would somehow catch up with other pupils, but no mechanism provided whereby they could do so. Nonetheless, teachers felt that a curriculum specifically designed for pupils in designated schools would not help to improve reading standards. They felt that the curriculum for pupils with general learning difficulties *might* be helpful, but indicated that they had received no related in-service. Some felt that it would have been useful to cross-reference the materials for general learning difficulties during in-service for the regular curriculum. Others complained that the curriculum had led to too much paperwork for teachers.

The greater emphasis on oral language skills was welcomed by country teachers, who noted that it also caused difficulties. They found such lessons difficult to conduct, as most had been trained prior to the emphasis on oral skills, and felt they lacked sufficient background knowledge to teach oral skills as well as they would like. They felt that the curriculum discouraged the use of class readers in the Junior classes, and encouraged a focus on oral language. Unfortunately, while they emphasized oral language in class, pupils received little practice when they went home. Thus, when pupils later begin formal reading, they find it quite difficult. However, none of the teachers indicated that parents had been given any information or advice about how to promote oral language.

Country teachers felt that the English curriculum had led to too much between-school variation in when reading is initiated, and worried that parents might query the delay in introducing reading in one school, relative to another. However, there was no indication that parents had been told the reasons for the delay in introducing reading. Indeed, country parents used the introduction of reading as an example of poor school-parent communication. One parent said she only accidentally discovered that her child had brought her first reader home from school. She said that her child had never said that she was supposed to start reading homework, while the school had not told parents that pupils were starting reading, that parents should help them, or, how they should help.

Resources

Teachers and principals in the country area were dissatisfied with their schools' resources for teaching English reading. They felt that most of the better resources were too expensive to allow purchase of adequate supplies, with principals explaining that they had to supplement their official funding with fundraising activities. Lack of oral language materials, and poor school library stock were identified by principals as particular problems, while teachers felt that their schools needed more pre-reading materials for those in Junior Infants. In contrast, those interviewed in the urban area felt that they had sufficient resources for teaching reading. Some schools had benefited from extra funding through their participation in the Breaking the Cycle scheme, while others had received resources from other agencies. Although all were happy with the *amount* of resources available, some felt that books that were interesting to older readers, yet easy to read, were difficult to access.

Reading Recovery had just been introduced on a small scale in one of the urban schools, while one of the teachers in the country area was being trained as a Reading Recovery teacher. The programme was praised as being highly successful, although it was also acknowledged that the long-term effects had yet to be seen. Other programmes or methods that were praised by those interviewed included PAT (Phonological Awareness Training), CAPER (Children and Parents Enjoying Reading), Letterland, Fuzzbuzz, Wellington Square, WordShark, incorporating newspapers into class work, and the introduction of novels to supplement reading schemes.

All of those interviewed had some experience of ICT-based materials designed to teach reading. Views were mixed on the merits of ICT, with some feeling that it was perceived as a cure-all, without any real evaluation of its merits. Most felt that greater training on the use of ICT would be helpful, particularly in terms of matching programmes to pupils. Some of the country teachers interviewed felt that pupils were less likely to guess when using ICT programmes, whereas in a class situation, the same pupils liked to shout out their guess immediately. They also felt that pupils enjoyed the interactive nature of the programmes, and that there was less need for constant feedback from teachers. However, some urban teachers felt it was difficult to help one child with an ICT-based programme and also supervise all other pupils in the classroom.

Attracting and Retaining Staff

In general, principals did not have difficulty in hiring and retaining full-time qualified staff. Country principals reported some difficulties getting temporary teachers, although it was acknowledged that the substitute teacher scheme (which consisted of three teachers attached to one of the schools) was a success. Some principals, whose schools were in the Breaking the Cycle scheme, thought that the 15:1 ratio in Junior classes was a factor that helped them to attract and retain teachers. One of the urban schools was a Gaelscoil, whose principal felt that the school's Dublin location made it difficult to attract teachers interested in working in a Gaelscoil. More generally, urban principals felt that the typically rural origins of trainee teachers made it difficult for Dublin schools to attract staff, as most wanted to teach where they grew up. An urban principal indicated some (unqualified) teachers leave their posts in February to begin the Graduate Diploma in Education, and suggested that if the course followed a normal academic year, it would be less disruptive to some urban schools.

Pre-service Training and In-Career Professional Development

Teachers repeatedly criticised pre-service training for insufficient emphasis on teaching reading. They believed that the Colleges of Education gave students plenty of advice on how to teach subjects like History and Irish, but assumed that students knew how to teach reading. Trainee teachers needed more information on the processes underlying reading, including how to develop phonological awareness in pupils. Principals noted that many of their newer staff had difficulty in teaching reading, despite otherwise being very competent, while teachers also identified the teaching of reading as an area in which they had initial difficulty. Urban teachers felt that pre-service training used a very middle class model, while staff in the country location felt that pre-service training needed a greater emphasis on oral language and language development.

Many felt that, despite the recent addition of modules on disadvantage, initial training did not prepare students for teaching in disadvantaged schools. Consequently, some of the urban interviewees proposed a mentoring programme for new teachers. This would provide structured advice for new teachers, and recognise the knowledge base established by experienced staff. One school had successfully initiated courses for new teachers on oral language and behaviour management, as well as an informal mentoring programme.

Views on in-career professional development (ICD) were more varied. ICD was perceived as somewhat helpful, but too theoretical, with insufficient practical advice on teaching in a designated school. Some stated that talking to other teachers was the most helpful part of ICD courses. An exception to this criticism was the initial training for the Early Start programme, which was praised as being specifically aimed at those working in designated schools, and practical rather than theoretical. Generally, urban teachers suggested that ICD could better meet the needs of teachers in designated schools, by, for example, dealing with how best to teach a class of 15 instead of 30 pupils. Finally, some felt that a minority of the Inspectorate were not sufficiently familiar with designated schools and were not in a position to monitor teacher performance adequately.

Within-School Assessment

All schools used standardised tests to assess the achievement of their pupils, with the MICRA-T and the DPRT cited as the most commonly used tests. The BIAP (*Belfield Infant Assessment Programme*) was criticised as being very time-consuming, while supplying little more information about a pupil than most teachers already knew. Pupils with very poor reading skills were administered diagnostic rather than standardised tests. Generally, tests were administered towards the end of the school year, although one school assessed all Senior Infant pupils early in the year, to identify those with potential learning difficulties. Principals found tests useful for identifying progress (at the school-level) from year to year, but class teachers did not seem to find test results very useful. Many viewed tests as useful only in terms of identifying pupils in need of learning-support, rather than having any influence on day-to-day planning of teaching.

Some pointed out that test norms were almost always for the end of the school year, too late to have any impact on teaching practices. One teacher said that she often felt she administered tests

as a courtesy to the teacher who would next be teaching her pupils. Others pointed out that May-administered tests were frequently inaccurate by September, as some pupils did not read during the school holidays. Thus, while such pupils' reading levels had declined significantly by September, others had maintained the development of their reading skills. Some country teachers felt that a test with January norms would be more useful. This would enable teachers to make better use of test results when planning their classes.

Principals and teachers in the country location noted many of their pupils found current standardised tests too difficult and demoralizing, but found out-of-grade testing unhelpful, as it embarrassed pupils when given a test marked as designed for a lower grade level. Despite this, none of those interviewed believed that a special test for designated schools was appropriate. In relation to test results, both groups of teachers felt that the 10th percentile was an inadequate benchmark for reading difficulties. All thought that major improvements in the achievement of pupils falling between the 10th and 20th percentiles could be facilitated with a small amount of additional specialist support. In contrast, those at or below the 10th percentile needed significant extra help in order to bring about even small improvements, and many were perceived to have special education needs.

Pupils' difficulties with vocabulary and sentence construction were repeatedly mentioned as important issues. Many felt that while early oral language skills were good predictors of later reading achievement, there was a dearth of appropriate early screening tests. Consequently, some of the urban principals and country teachers interviewed felt that a standardised language test for use in the Infant classes would be beneficial. Principals were asked if they believed that a school-wide programme of very frequent pupil assessment and monitoring, as proposed by programmes such as Success for All, was a useful approach. None believed that such an approach was feasible. Class teachers were perceived to have limited time, and principals felt that it would be more beneficial to spend the time teaching rather than assessing pupils. However, urban principals thought that frequent assessment would be beneficial and perhaps feasible for pupils in receipt of resource teaching.

Psychological Assessments

The service offered by NEPS was described as insufficient, largely due to poor staffing levels, and staff turnover. Those whom schools had formerly dealt with had been promoted, requiring the establishment of new working relationships. Staff in the country schools saw NEPS staff as a source of pupil psychological assessment, and felt that the number of days per year allocated to each school was not enough to assess most of their pupils in need of assessment. They felt that there was a long delay before a pupil was assessed, with schools having to prioritise pupils for assessment. Country schools tended not to use school funds to pay for pupil assessments, relying instead on NEPS staff. Urban schools tended to use school funds to pay for private assessments, using NEPS staff for whole-school issues. However, some principals noted that private assessments were harder to organise since NEPS now employed many of those whom schools had used to carry out private assessments.

Rural principals and urban teachers criticised some of the feedback they received from assessments as being either too brief, too impractical, or as suggesting only something that had already been tried. Urban teachers said they would prefer if NEPS staff developed a programme in consultation with class and learning-support teachers, whereby each pupil had specified targets. They also pointed out that they do not get a proper opportunity to discuss assessment results either with NEPS staff or with pupils' parents, as they cannot take time off class, nor can they discuss such issues in front of a class. They suggested a 'floating' teacher should be allocated to schools to provide cover to teachers who wanted to attend a case conference with NEPS staff and with parents.

Some of those interviewed discussed the effect the long wait for an assessment (particularly for speech and language difficulties) had on pupils. Children had to wait a number of years to be assessed and then had a further wait for therapy or some form of intervention, with the effect that the child's self-image had taken 'a hammering' by the time help was finally available. Thus, the work of personnel such as a speech and language therapist was made much harder, as the child was less receptive to help. Parents also recognised that delay in assessment was detrimental to children's chances of catching up with their classmates. In particular, urban parents emphasised the negative effect on the child's (and sometimes the parent's) self-esteem. Many had children diagnosed as

dyslexic, but diagnosis did not occur until a few years after an initial difficulty was identified. As a result, the children began to feel that they were stupid, parents became frustrated and began to wonder had they treated the child differently to his/her siblings. Even before intervention, diagnosis alone was a relief, as it was seen as providing an explanation.

Some of the country principals raised a different issue that arose because of the long delay in getting pupils assessed. A pupil whose difficulty only became apparent in Fifth class was likely to be completing Sixth class before they were assessed. Consequently, it was highly unlikely that any intervention would be in place before s/he left primary school. Some principals pointed out that it was therefore very tempting to prioritise younger pupils, who were likely to receive some intervention in their school. This was, of course, unfair to the older pupil.

Provision of Learning-Support

Teachers and principals expressed broad satisfaction with the *Learning-Support Guidelines*, but described them as not always relevant to life in a designated school. All teaching staff discussed the heavy workload of learning-support teachers. Some teachers working in Breaking the Cycle schools discussed how class teachers had a ratio of 15:1, whereas learning-support teachers had caseloads of over 30 pupils. Country principals and teachers raised the issue of shared learning-support teachers, generally indicating that the allocation was insufficient. Teachers said that the system was inflexible, while principals thought that all designated schools should have a full-time learning-support post. One of the country principals felt that inadequate resources were forcing schools to select pupils for learning-support. Unfortunately, there was a temptation to prioritize children with behavioural difficulties, which would mean that quiet or withdrawn children lose out. Some of the country teachers indicated that one of the main reasons learning-support was not as effective as it could be was because of the very poor attendance of many pupils in receipt of learning-support.

Both groups of teachers criticized the *Guidelines* for not making provision for class and learning-support teachers to meet. Urban teachers proposed that a floating teacher should be allocated to schools, as the cover they provided would allow class teachers to attend meetings with relevant personnel. One of the country schools had implemented a pilot programme providing cover for class teachers so that they could meet on a fortnightly basis with the learning-support teacher. Teachers found it preferable to being handed a report with no opportunity for discussion. They indicated that any queries they had could be dealt with immediately, and felt they got more information from talking to their colleague than from reading a report. The learning-support teacher, in consultation with the principal, had developed a modified version of a report, which took minimal time to complete, but formed the basis for discussion with the teacher. Thus, while the learning-support teacher spent more time in meetings, she saved time because of a reduction in paperwork.

Both groups of principals worried that the necessary focus on reading by learning-support teachers meant that pupils who had difficulties with Mathematics were not receiving the help they needed, and queried the appropriateness of the 10th percentile was as a cut-off point for learning-support. Some felt that many of those whose scores fell below the 10th percentile had special needs, and that learning-support on its own was not always sufficient to help these children. The staff interviewed worked in schools where large proportions pupils were in need of learning-support. Consequently, principals were asked if they had tried different models of learning-support provision, with co-operative learning and school-wide restructuring of the teaching of reading mentioned as examples from the *Learning-Support Guidelines*. None of those interviewed appeared to have adopted a model of provision that was markedly different from that which operates in most schools.

Integration Within the School

Principals were asked how well the work of the various teachers was co-ordinated in their schools. Due to time constraints, only one urban principal, but all country principals, had an opportunity to respond. The urban principal felt that the school's support team (including learning-support, class and resource teachers) worked well together and generally had a co-ordinated approach to pupils. However, a sustained co-ordinated approach had been made more difficult by high staff turnover, a

problem that had abated recently. Country principals emphasized that integration between various personnel was hampered by the difficulty in arranging meetings between class teachers and other staff. While one school had provided cover for class teachers to allow them to meet the learning-support teacher, this was an atypical situation, and most discussed the unsatisfactory nature of ad hoc meetings held in corridors or during lunch time.

Suggestions

All of those interviewed were asked to suggest what could be done to ensure that every child was able to read at a level appropriate to their age. Parents were asked what sort of things the school or the Government could do, while teachers and principals were asked to each suggest what the Department of Education and Science could do. Suggestions that have already been described in earlier parts of the chapter are not repeated here.

Early Intervention

With the exception of the urban teachers, all groups stated that more attention needed to be paid to early intervention. Parents felt that it was very important for pupils' difficulties to be assessed as early as possible. They thought that children had typically fallen well behind their classmates, and may also have developed behavioural or emotional problems as a result of their learning difficulties, prior to any intervention. Some of the country parents pointed out that easily corrected difficulties, such as poor eyesight or hearing, were often not noticed, but had a major affect on children's ability to learn in the classroom.

Country teachers and both groups of principals felt that it was important that schemes such as Early Start be extended. Principals in the urban area noted that many (non-Early Start) pre-schools and playgroups in disadvantaged areas did not provide an optimum environment for learning and promoting reading readiness. They were frequently staffed by people on Community Employment schemes, rather than qualified staff. While such staff may do their best, many did not have particularly high literacy skills and were not in a position to provide a good preparation for primary school. Given that children attending them often came from home backgrounds where there was a dearth of literacy-related activities, it was doubly important that children from disadvantaged areas attended pre-schools run by fully trained staff.

Maximising Parental Involvement

The country principals and urban parents indicated that a minority of parents had major difficulty in helping their children with their educational needs. Principals proposed that counselling and support for such parents should be available from health boards. The urban parents proposed more one-to-one help for parents, with an emphasis on those who tended not to become involved in school-related issues. They suggested that help might include providing direct assistance to parents who have literacy difficulties, and changing the attitudes of parents with poor opinions of school. To do the latter, recognition would have to be given to the probably very negative experience such parents had of school. Urban parents also suggested that more parents should be encouraged to participate in shared reading programmes in the school.

Reduced Class Size and Additional Resources

Only the country principals did not mention class size. Principals and parents in the urban area felt that the Breaking the Cycle ratio of 15:1 in Junior classes should be extended to Senior classes. Other groups simply indicated that a reduction in class size would help to improve reading achievement. Country parents saw large classes as problematic, because not only did teachers have less time for each pupil, but also, pupils might be too embarrassed to admit to having problems in front of a large class. Aside from reduced class sizes (which generally requires an increase in the number of class teachers), other suggestions were made about increasing the number of school and allied staff. Urban principals wanted more 'trained personnel' in the school, while the urban teachers wanted more classroom and special needs assistants. Country principals wanted easier access to personnel, including NEPS staff, and secretarial support to free principals from form-filling. They also felt that schools should be able to access more material resources than was the case, while urban teachers suggested an increase in grants for book purchases in designated schools. Country parents

thought that pupils should have more access to computers, as, not only were computer skills essential for future employment opportunities, but children enjoyed learning with computers. Urban principals also thought greater access to NEPS staff would be beneficial, noting that matching children to a programme appropriate to their needs required diagnostic skills and experience of programmes that most teachers did not have. They felt that NEPS was the most appropriate body to provide advice to schools on tailoring programmes to pupils' needs.

Reading Recovery

Two suggestions were made in relation to Reading Recovery. Firstly, urban principals suggested that Reading Recovery might be more appropriate than learning-support for pupils scoring below the 10th percentile on standardised tests of reading achievement, while learning-support could be offered to those between the 10th and 20th percentiles. Secondly, some urban teachers felt that cover should be provided for teachers being trained to provide Reading Recovery.

Compulsory School Attendance Age

Country teachers thought that legislation concerning the age at which school attendance is compulsory needed to be modified. Pupils can be enrolled in school when as young as four, but attendance is not compulsory until they are six. Thus, a Junior Infants class can have pupils ranging in age from those who have just turned four to pupils aged six years and three months. Some of the teachers pointed out the interests of pupils at these age extremes are different, and materials that are appropriate for one age are often inappropriate for the other.

Pupil Attendance and Time-keeping

Country teachers indicated that poor attendance by pupils was a major obstacle to their academic achievement. This reflects an issue raised by school principals concerning an apparent lack of any real monitoring of school attendance following the inception of the Educational Welfare Board. Country teachers also raised poor time-keeping as a problem. Some pupils arrived very late to class. This not only meant that they missed significant parts of lessons, but also that lessons were disrupted. The teachers felt that there should be greater enforcement of school attendance and of time-keeping, although they did not specify a mechanism for enforcement.

Other Issues

A number of other issues were raised by interviewees. Country teachers felt that it was very important to try to cater for the needs of the 'average' child in a designated school. Such pupils were frequently not being stretched academically, and did not get the attention that they needed. Urban teachers thought that teachers needed more planning time to adapt to changes in the curriculum. Country principals indicated that teachers in designated schools had to act as advocates for their parents, as the parents themselves were often not in a position to do so. The 'Your Education System' meetings were offered as an example of how the voices of middle class parents would be heard, but how few parents from designated schools would attend, and how even fewer would be heard. They also felt that as a result of falling birthrates, schools are now in a consumer-driven marketplace. The Department of Education and Science needed to realise that parents often took a very negative view of those that adhered to the 'no reading until Senior Infants' guideline, when other schools in the area were teaching reading in Junior Infants.

Country parents felt that school should be made more fun for pupils and that there should be less pressure on post-primary pupils. They also thought that far more money needed to be directed at education in general, and that rural areas simply did not get the same amount of funding as urban areas. Like their country counterparts, urban parents suggested that more money should be spent on the education system, and that teachers should have greater influence on where funds were allocated. They also felt that more time should be devoted to teaching reading.

11. A Model of Reading Literacy

By Nick Sofroniou

In Chapters 5 to 8, relationships between a range of explanatory variables and pupil performance on the reading literacy assessment were described. Many of these characteristics associated with achievement are themselves interrelated. Further, an apparent relationship between a variable and achievement may occur because both are related to a third variable, not considered. In this chapter, the relationships between reading achievement and a range of explanatory variables are examined simultaneously. This minimises the possibility of being misled by the spurious associations which can occur when only one explanatory variable at a time is considered.

The achievement scores of pupils in a class or school are likely to show a form of dependency known as clustering. Multilevel regression models (Goldstein, 1987, 1995; Longford, 1993) are used with these types of data since they distinguish between the effects of variables at different levels (e.g., school, class and pupil) and allow the total variation in pupil achievement to be partitioned into between- and within-cluster variance components. This involves selecting key variables and estimating how achievement varies as each explanatory variable changes in value, taking into account the other variables that are also present in the model. Checks carried out during model building let us evaluate how well each model describes the patterns of pupil achievement.

In the context of the current study, due to time constraints, a multilevel model of achievement in reading was constructed for only one of the three grade levels for which data were available. Third class was selected because associations between explanatory variables and achievement might be expected to be more stable in Third class than in First class, and Third class is of greater interest than Sixth class, where pupils are preparing to leave primary school.

The chapter is divided into eight sections. First, variance in reading achievement scores is partitioned into between-cluster (school) and within-cluster variance components. Second, procedures used in developing the model are outlined. Third, characteristics of the subsample of pupils in Third class represented in the model are discussed. Fourth, explanatory variables are evaluated as separate models of achievement. Fifth, the final model of reading literacy is described. Sixth, examples of contributions of each variable to fitted scores are given. Seventh, model fits with alternative school context measures of socioeconomic status are described. Eighth, implications of the final model for policy and practice are considered. The sections that follow provide a somewhat technical description of variance decomposition and model building. Some readers may wish to skip these sections and move ahead to the eighth section, 'Implications of the Final Model'.

Between- and Within-Cluster Variance Components

The design of the present study involved the selection and testing of two intact classes (where available) within each school. This induces an intra-cluster correlation (ICC) between pupil scores in schools. Since we did not intend to fit explanatory variables for classes, two-level models are used in the analysis. This means that the total variation in scores is split into a between-cluster component, corresponding to school variation, and a within-cluster component, corresponding to class and pupil variation. The between-cluster variance component corresponds to the ICC expressed as a percentage. For First class, this value is 18.1%, for Third class it is 22.9% and that for Sixth class is 13.5% (Table 11.1).

Table 11.1: Variance components in reading achievement scores, by grade level

	Percent of Between-Cluster Variance	Percent of Within-Cluster Variance	Total
1st class	18.08	81.92	100.0
3rd class*	22.85	77.15	100.0
6th class	13.45	86.55	100.0

*Based on the 1909 cases used in model building; for the full sample of pupils in Third class (2120), the percent of variance attributed to differences between clusters (schools) was 22.17.

Postlethwaite (1995) suggests that large between-school variance components are suggestive of more heterogeneous school systems. The values reported here suggest a relatively homogeneous school population among schools designated as disadvantaged, and indicates that schools may be more similar to one another with respect to achievement at the Sixth class level than at other levels.

Procedure Used for Multilevel Modelling

A form of multilevel model known as a *hierarchical linear model* was used. This is a type of regression model that contains a random component for each level. In its simplest form this will involve a Normal residual and a random intercept[1] for each level of clustering. Estimated pupil effects may also be allowed to vary by fitting a random coefficient for a variable, which will suggest a range of likely values that the parameter estimate takes over the population of clusters (schools). Observations are assumed to be independent of one another once we condition on the random effects (i.e., the random intercept and any random coefficients) in the model. The variables considered for evaluation in the model-building were those which showed significant associations with achievement and/or which are of high policy or theoretical interest. Where several variables were highly correlated or linked theoretically, the one with the strongest association with achievement was chosen, or a composite variable was generated (such as the school deprivation construct described in Chapter 8). This reduces the possibility of problems with multicollinearity[2] amongst explanatory variables (Hutcheson & Sofroniou, 1999). The final set of candidate school- and pupil-level variables used in modelling is given in Table 11.2.

Table 11.2: Final set of pupil and school candidate variables

Pupil Variable
Age (Chronological age in months)
Gender
Attendance (Percentage attendance in last quarter)
Books in the Home Score (Number of books in the home on scale; range: 1-7)
Lone Parent Status (Whether or not child from a lone parent family)
Medical Card (Family medical card possession)
Number of Siblings (Number of brothers and sisters: 0, 1, 2, 3, 4+)
Parent Education (Highest level of educational attainment reached by either parent)
Reading before Schooling (Frequency of being read to by someone at home prior to formal schooling)
Socioeconomic Status (Categorical variable derived from ISEI score, based on parent occupation)
School Variable
School Size (Number of pupils enrolled in the school)
School Deprivation Index (School SES Composite)
Teacher Turnover (% of teacher vacancies as proportion of number of teaching posts in past two years)
School Gender Composition (Whether school serves all boys, all girls, or boys and girls combined)
Percent of Pupils with Medical Card (Percent of pupils whose family possess a medical card)
Percent of Pupils with Books Grant (Percent eligible for the books grant for needy pupils)

Following the advice in Aitkin, Francis and Hinde (in preparation), models in this chapter are unweighted, as the explicit stratifying variable School Size was evaluated as part of model development. All the continuous explanatory variables (variates) were centred by subtraction of their grand-mean.[3] This improves the numerical estimation by the computer software and gives the intercept the convenient interpretation of the achievement score for a pupil at the mean of the original explanatory variable, rather than zero (as is often the case in conventional ordinary least squares regression models). To allow straightforward comparison, categorical explanatory variables

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[1] The intercept varies across schools. This variation is Normally distributed, and is summarised by a cluster-specific random effect, in addition to the Normally distributed residual (within-cluster) variation.
[2] Multicollinearity arises when explanatory variables are highly correlated, and leads to instability in the estimation of model terms (Hutcheson & Sofroniou, 1999).
[3] Grand-mean refers to the mean across all observations of a variable, as opposed to a group-mean, which refers to the mean of observations in a given cluster (school).

(factors) have their reference level set to the same group as in the descriptive chapters (i.e., Chapters 5-8).

Models were compared by means of the *Akaike Information Criterion* (AIC) which adds a penalty of twice the number of parameters in the model to the deviance statistic (Akaike, 1973). This is a measure specifically designed for the repeated process of testing terms during model-building, where good-fitting models are emphasised so long as not too many parameters are fitted. Generally one would prefer a model with the smallest value of AIC, though differences within 1-2 points of the 'best' deserve consideration and those with differences of 3-7 points have considerably less support (Burnham & Anderson, 1998). An account of AIC and its advantages over traditional significance tests in the context of model-building is given in Lindsey (2004). One key advantage is the straightforward comparison of models that are not nested one within the other. This approach was used to examine various forms of possible curvilinear relationships between continuous explanatory variables and the achievement scores, including quadratic and logarithmic models. In addition, two-way interactions at the pupil-level and cross-level interactions between cluster-level (school) variables and pupil-level variables were evaluated using the AIC. Actual AIC values are reported, rather than differences compared to some reference model, since comparison is possible amongst various models, whether nested within each other or not.

Separate random-intercept models of achievement for each explanatory variable were initially constructed to evaluate whether, when variables were later entered simultaneously, the parameter estimates had changed substantially. Such change would indicate that the explanatory variables in the model were related in a complex manner and that the parameter estimates were sensitive to the other variables present. Full maximum likelihood estimation was implemented as it allows the AIC to be used to evaluate fixed effects as well as any random effects considered for the model. Categorical variables were examined by means of omnibus or overall changes in AIC, in which the model was fitted both with and without the corresponding set of dummy variables. The NLME library of Pinheiro and Bates (2000) implemented in the R statistical package was used to fit the multilevel models.

Several pupil-level variables were only available by means of returned Parent Questionnaires. Therefore, a non-missing indicator variable was constructed, and these pupil-level variables were nested in it (see Lindsey & Lindsey, 2001; see Inset 11.1). This greatly reduces the impact of non-returned Parent Questionnaires, since values on variables from other sources are retained. Use of a single non-missing indicator variable for items on the Parent Questionnaire avoids problems of multicollinearity, as separate indicator variables for each missing questionnaire item are likely to be highly correlated with each other. However, it means that pupils whose parents did return the Parent Questionnaire, but did not complete one or more of its items relating to the variables used in the model, are excluded from analysis.

Inset 11.1. *Crossed and Nested Variables in Hierarchical Linear Modelling*

Crossed Variables

Two variables are said to be *crossed* when they are both fitted to the model as main effects with an interaction term between them. For example, an interaction between the School Deprivation Index and Pupil Gender can be specified as:

School Deprivation **+** *Pupil Gender* **+** *School Deprivation* **x** *Pupil Gender*

Nested Variables

One variable is said to be *nested* inside another when the first is present only in the interaction term between both variables, and the second is also present as a main effect. For example, Medical Card is nested in the non-missing indicator for whether or not a completed Parent Questionnaire is available in respect of the pupil:

Non-missing Parent Questionnaire **+** *Non-missing Parent Questionnaire* **x** *Medical Card*

Use of a single non-missing indicator variable also means that the parameter estimates for the variables not derived from the Parent Questionnaire can be tested to see if they vary with missingness on the Parent Questionnaire. The missing value method was extended to a second level of nesting using a non-missing indicator for answering the item on parental education in the Parent Questionnaire. Therefore, the response to the parent education item was itself nested within the nest 'non-missing parent questionnaire'/ 'non-missing parent education item'. The achievement scores of cases retained for modelling and those omitted were compared to confirm that those excluded were not lower scoring pupils.

All the candidate pupil-level variables were then entered simultaneously into a single random-intercept model. Non-significant variables were removed using a manual backwards elimination strategy, whereby the variable which reduced the AIC by the largest quantity was eliminated. This was continued until no further variables could be removed without the value of the AIC increasing. At this point all the significant school-level variables were added as well as School Size (the explicit stratum design variable). Further elimination of the variables in the model was carried out until no smaller AIC value could be obtained. Curvilinearity of the continuous variables was examined by means of the addition of polynomial terms up to the cubic order, but linear relationships were sufficient since the AIC increased when the polynomial terms were added.

Each two-way interaction (pupil-level and cross-level) was examined, one at a time, by addition to the main-effects model. Any significant interactions were then evaluated by simultaneous addition to the main effects model. Finally, all pupil-level variables were examined to see whether their effects varied across schools, by means of the addition of random coefficients for their parameter estimates. Factors with more than two categories were examined in the presence and absence of all the corresponding random coefficients for the dummy variables.

Characteristics of the Analysed Subsample

Using the nesting of variables within the non-missing indicator variables, data for 1909 of the original 2120 Third class pupils were used (90.0%). The 211 pupils not included in the analysis were missing data on one or more of age, attendance and gender, and/or had returned the Parent Questionnaire but were missing one or more of those questionnaire items considered for inclusion in the model (except Parent Education). Constructing a 2-category factor for whether a pupil was retained for analysis or excluded allowed a comparison of scores for the two groups. The AIC for the model with the factor for Inclusion was little different from that of the null random-intercept model (117120.92 vs. 117120.46), for the 2120 cases. This strongly suggests that there was no difference between the scores for those pupils excluded from the modelling analysis and those retained. The parameter estimate for the Inclusion factor compared to its standard error also confirmed this finding (Included-Not Included, pe=1.268, se=1.022).

Parent Questionnaires had been returned for 1702 (89.2%) of the 1909 pupils used in the analyses, while data on the Parent Education variable were available for 1608 pupils (84.2%). Evaluations of the missing versus non-missing cases for Parent Questionnaire and Parental Education are presented in the section reporting separate models fitted to the explanatory variables.

Explanatory Variables Evaluated as Separate Models

Table 11.3 presents the coefficients for each pupil-level variable evaluated as a separate model. For comparison, the AIC of the null random-intercept model is given. A model with Age alone (AIC=15416.53) does not improve the penalized model fit over the null random-intercept model (AIC=15416.27). This can also be seen in the standard error for Age, which is almost as large as its parameter estimate. In contrast, models with Gender (AIC=15405.95), Attendance (AIC=15380.53) and Non-missing Parent Questionnaire Indicator (AIC=15386.05), fitted as separate models, suggest worthwhile improvements in the model fits, since they lead to substantive reductions in the AIC statistic.

Variables nested within the Non-missing Parent Questionnaire indicator variable can be compared to the model with just the Non-missing Parent Questionnaire indicator variable. Books in the Home Score, Reading before Schooling, Socioeconomic Status, Medical Card, Lone-Parent

Status, Siblings and Non-missing Parent Education Indicator, fitted as separate models nested within the Non-missing Parent Questionnaire Indicator, improve the model fit sufficiently over the Non-missing Parent Questionnaire Indicator alone. Categorical variables with more than two levels (for example, Number of Siblings) have several parameter estimates and these are examined by a single omnibus evaluation of their inclusion.

Parent Education can be compared to the model with the two nested non-missing indicator variables. Thus, Parent Education, nested within both the Non-missing Parent Questionnaire Indicator and the Non-missing Parent Education Indicator, provides an improvement in the AIC statistic over the simpler model containing just the Non-missing Parent Education Indicator nested within the Non-missing Parent Questionnaire Indicator.

Table 11.3: Achievement in reading literacy: All level 1 variables tested as separate models by addition to the null random intercept model

	Parameter	Standard Error	AIC
Intercept	100.337	0.931	15416.27
Age	−0.948	0.720	15416.53
Gender			15405.95
Male-Female	−2.834	0.804	
Attendance	0.214	0.035	15380.53
Non-Missing Parent Questionnaire (NM ParQuest)	5.733	1.005	15386.05
NM ParQuest X Books in the Home Score	3.586	0.260	15208.92
NM ParQuest X Reading before Schooling			15265.98
Weekly–Daily	−6.029	0.775	
Monthly–Daily	−9.775	0.971	
Rarely–Daily	−11.685	1.470	
NM ParQuest X SES (ISEI)			15320.94
2nd Quarter–1st Quarter	0.891	1.003	
3rd Quarter–1st Quarter	0.823	0.993	
4th Quarter–1st Quarter	5.754	0.987	
Misc. Low SES–1st Quarter	−3.297	1.066	
NM ParQuest X Medical Card Access			15306.67
No Medical Card	6.117	0.667	
NM ParQuest X Lone Parent			15378.51
No (Lone Parent) – Yes	2.231	0.720	
NM ParQuest X Number of Siblings Category			15342.78
0 Siblings–1 Sibling	−1.992	1.277	
2 Siblings–1 Sibling	−2.208	0.859	
3 Siblings–1 Sibling	−3.318	0.970	
4+ Siblings–1 Sibling	−6.899	0.972	
NM ParQuest X NM Parent Education (ParEd)	3.677	1.413	15381.29
NM ParQuest X NM ParEd X Parent Education			15290.46
Intermediate/Junior Cert–Primary	4.572	1.021	
Leaving Cert–No Post-primary Exam	7.690	1.086	
3rd Level Diploma– No Post-primary Exam	9.744	1.211	
3rd Level Degree– No Post-primary Exam	12.221	1.467	

Note: Variables nested within non-missing indicator variables have only the parameter estimates for their interaction terms shown, though the required marginal terms were included in the model fits.

Table 11.4 presents the coefficients for each cluster-level (school) variable evaluated as a separate model. The AIC of the null random intercept model is also reproduced. Models with School Size or School Gender Composition alone do not appreciably improve the AIC statistic over that of the null random-intercept model. In contrast, models with School Deprivation Score, Teacher Turnover, Percent of Pupils with Medical Card and Percent of Pupils with Books Grant fitted as separate models, show improvements in the model fits that are worthwhile.

Table 11.4: Achievement in reading literacy: All level 2 (school-level) variables tested as separate models by addition to the null random intercept model

	Parameter	Standard Error	AIC
Intercept	100.337	0.931	15416.27
School Size			15417.83
Medium–Small	4.141	2.972	
Large–Small	4.261	2.772	
School Deprivation Index	–6.012	0.583	15357.84
Teacher Turnover	–0.136	0.058	15412.99
School Gender Composition			15414.31
Mixed–Boys	1.004	2.204	
Girls–Boys	5.640	2.505	
Percent of Pupils with Medical Card	–0.255	0.034	15379.15
Percent with of Pupils with Books Grant	–0.157	0.030	15395.45

The Final Model of Reading Literacy

All the candidate pupil-level variables were fitted simultaneously in an initial model fit: that is, Age, Gender, Attendance, and interactions between the Non-missing Parent Questionnaire indicator and each of Books in the Home Score, Reading before Schooling, Socioeconomic Status (ISEI score), Individual Medical Card, Lone Parent Status, Number of Siblings, and (nested within the Non-missing Parent Education indicator) Parent Education. The model fitted considerably better than the any of the separate models (AIC=15100.70). However, omitting each variable in turn and then replacing it suggested the following sequence of elimination of model terms: Non-missing Parent Questionnaire by Lone Parent Status; Age; Non-missing Parent Questionnaire by Non-missing Parent Education by Parent Education; and Non-Missing Parent Questionnaire by Non-missing Parent Education.

This resulted in a reduced model containing the following terms: Gender; Attendance; Non-missing Parent Questionnaire by Books in the Home Score; Non-missing Parent Questionnaire by Reading Before Schooling; Non-missing Parent Questionnaire by Socioeconomic Status; Non-missing Parent Questionnaire by Medical Card, and Non-missing Parent Questionnaire by Number of Siblings. No further terms could be omitted from this model without an increase in the AIC statistic (AIC =15096.28). All of the school variables were then added as main effects to the model, improving the model further (AIC=15076.36). However, School Size, School Gender Composition, and Teacher Turnover were eliminated in this sequence, as leaving out each term resulted in improvements in the penalized model fit (i.e., a drop in the AIC).

Individual Socioeconomic Status (ISEI) (nested in the Non-Missing Parent Questionnaire indicator) was then omitted because the penalized model fit for its omission (AIC=15070.02) was only fractionally larger than the model containing it (AIC=15069.63) and all its parameter estimates are well below two times its standard error (a criterion indicting significance). Polynomial terms for two continuous variables – School Deprivation Index and Attendance – were explored, but fitting linear relationships with achievement for each was judged to be sufficient.

Each two-way pupil-level interaction was then added to the model, one at a time. This suggested that all the additional terms corresponding to Attendance crossed with Reading before

Schooling (nested in its Non-missing Parent Questionnaire indicator) could be incorporated into the model. Following this, the two-way cross-level interactions between the School Deprivation Index and the pupil-level variables were each evaluated by addition to the model. This indicated that the addition of the term School Deprivation Index by Pupil Gender was required since the AIC improved to 15066.40, compared to the AIC for the model without pupil-level or cross-level interactions of 15070.02. The model was then evaluated with both sets of interactions present and showed a further improvement in the AIC statistic (15063.18). Evaluation of the addition of random coefficients for the pupil-level variables, one at a time, failed to improve the model further, indicating that a random-intercept model was sufficient. In other words, the parameter estimates for the pupil-level variables could be considered constant across clusters (schools).

The formula for explained variance (based on Snijders and Bosker (1999)) is given in Inset 11.2 and uses a value for the typical group size. The mean number of Third class pupils in each school, i.e., 24 pupils, was entered for this value. Fitting only the pupil-level variables and interactions gives explained variances of 46.4% and 23.5% for the between-cluster (school) and within-cluster (class and pupil) components, respectively. Including the school-level variables and cross-level interactions improves these values by an additional 22.3% and 5.9%. Thus, the final model explains 68.7% of the between-cluster variation and 29.4% of the within-cluster variation.

Inset 11.2. *Calculation of the Proportion of Explained Variance in Achievement*

The method used to calculate the proportion of variance in achievement at level 2 (school level) requires one to use a representative value for the size of the level 2 clusters. The mean number of Third class pupils in a school – 24 pupils – was used for the representative level 2 cluster size. The formulae used were:

Level 1 R^2 = *1 – (Var L1F + VarL2F)/(VarL1N + VarL2N)*

Level 2 R^2 = *1 – (Var L1F/CS + VarL2F)/(VarL1N/CS + VarL2N)*

Where VarL1F = Level 1 variance of fitted model; VarL2F = Level 2 variance of fitted model;

VarL1N = Level 1 null model variance; VarL2N = Level 2 null model variance; CS = Cluster Size

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Contributions of the Explanatory Variables to Fitted Scores

The parameter estimates for the model are given in Table 11.5, together with their standard errors and a measure of how much the model deteriorates (its AIC statistic) when a term is omitted. The AIC statistic is not given when a variable also appears in a higher-order interaction. For example, Table 11.5 shows an interaction between School Deprivation Index and Pupil Gender, as well as main effects for both terms. Only the removal of the interaction term is evaluated in the table. Categorical variables with more than two levels contain more than one parameter estimate and these are considered in a single omnibus evaluation of their removal (i.e., only one AIC is given). For example, the 4 terms for Siblings (nested in the Non-missing Parent Questionnaire indicator) are removed in one go.

Due to the choice of reference categories for the categorical variables and the use of mean-centred continuous explanatory variables, the intercept of the model (96.94) corresponds to the fitted score for a female pupil in an average school deprivation context, with average attendance, whose parent(s) did not return the Parent Questionnaire. Fitted values for other combinations of pupil are constructed by inserting the appropriate parameter estimates. In the case of continuous variables, the parameter estimate is multiplied by the chosen example value of the explanatory variables (first subtracting the mean of the variable if grand-mean centering was used when fitting the variate).

In the case of categorical variables fitted only as main effects, the difference between each level and the reference category can be directly read from Table 11.5. Therefore, pupils from families with no Medical Card tend to score 2.97 scale points higher than those from families who have a Medical Card. Similarly, the Number of Siblings categories give the difference in score

expected for each size of family compared to those with 1 sibling, which forms the reference category. Pupils who are the only child score 1.06 points below their counterparts with 1 sibling (the reference category), while those with 2 siblings score 1.28 points below this. An increasing downward trend is shown for pupils with 3 siblings (1.93 points lower) and 4 or more siblings (3.71 points lower).

Table 11.5: Final model of achievement in reading literacy (Third class)

	Parameter	Standard Error	AIC, with Term Omitted
Intercept	96.935	1.093	
School Deprivation Index	–2.604	0.703	
Pupil Gender (Male–Female)	–2.624	0.696	
Attendance	0.196	0.075	
Non-missing Parent Questionnaire (NM ParQuest)	0.282	1.644	
School Deprivation Index X Gender			15066.40
Male–Female	–1.755	0.771	
Attendance X NM ParQuest	–0.094	0.108	
NM ParQuest X Books in the Home Score	2.345	0.281	15130.21
NM ParQuest X Reading before Schooling			
Weekly–Daily	–3.301	0.780	
Monthly–Daily	–5.626	0.995	
Rarely–Daily	–4.849	1.513	
NM ParQuest X Medical Card Access			15080.57
Medical Card (No–Yes)	2.974	0.677	
NM ParQuest X Number of Siblings Category			15070.99
0 Siblings–1 Sibling	–1.059	1.204	
2 Siblings–1 Sibling	–1.275	0.812	
3 Siblings–1 Sibling	–1.928	0.922	
4+ Siblings –1 Sibling	–3.711	0.950	
Attendance X NM ParQuest x Reading before Schooling			15066.17
Weekly–Daily	–0.020	0.092	
Monthly–Daily	–0.144	0.117	
Rarely–Daily	0.312	0.144	
Variance Components			
Cluster Level = 12.290			
Residual = 146.873			

Variables dropped from the model (in sequence

NM Parent Questionnaire X Lone Parent Status, Age, NM Parent Questionnaire X NM Parent Education X Parent Education, NM Parent Questionnaire X NM Parent Education, School Size, School Gender Composition, Teacher Turnover, NM Parent Questionnaire X Pupil Socioeconomic Status (ISEI)

Final model AIC=15063.18

A continuous variable which only occurs in the model as a main effect has the interpretation of the improvement in scale score which corresponds to a 1 unit increase in the explanatory variable. However, since the integer values of the Books in the Home Score (fitted as a continuous variable) are non-linearly related to the number of books in the question item, the contribution to the fitted scores for each number of books is shown in Table 11.6. These suggest that, compared with pupils from homes with 11-50 books, those with zero books show a deficit of 4.69 points and those with 1-10 books show a deficit of 2.34 points. In contrast, those from homes with 51-100, 101-250 books and more than 250 books score 2.34, 4.69, 7.03 scale points higher than their counterparts with 11-50 books, respectively.

Table 11.6: Contribution of fitted scores for Books in the Home

Index	1	2	3	4	5	6
Books	0	1-10	11-50	51-100	101-250	250+
Contribution	2.345	4.690	7.035	9.380	11.724	14.069

The remaining variables involve interactions. Calculations using several parameter estimates are combined to produce a value that is added to the intercept. Table 11.7 gives the contribution to fitted scores for some combinations of the interaction between School Deprivation Score by (pupil) Gender. The example for the School Deprivation Index is the mean deprivation scores of the lowest, middle and upper thirds of school scores (expanded to the pupil level). These are expressed as deviations from the grand mean on the School Deprivation scale, low= –1.134, medium=0.041 and high=1.083. In comparison to female pupils in a school at the mean of the low School Deprivation Index category (i.e., a 'less deprived' school), those females whose schools score at the mean of the medium and high School Deprivation Index (i.e., 'more deprived' schools) have fitted values that are 3.06 and 5.77 points lower, respectively. In the case of male pupils, the corresponding deteriorations in fitted value are 5.12 and 9.66. This implies that, adjusting for other variables in the model, a male pupil in a school at the mean of the high category on the School Deprivation Index will have a score that is about two-thirds of a standard deviation lower than that of a male pupil in a school at the mean of the low category on the School Deprivation Index. Not only are boys scoring less than girls in fitted values from the model, but the impact of school deprivation is greater for boys, with a steeper slope of deterioration, corresponding to increased school deprivation.

Table 11.7: Contributions of fitted scores for School Deprivation Index by Pupil Gender

Pupil Gender	School Deprivation Index		
	Low	Medium	High
Females	2.953	−0.107	−2.821
Males	2.319	−2.803	−7.345

Table 11.8 gives the contribution to fitted scores of the interaction between Attendance by frequency of Reading before Schooling. The examples for Attendance are the mean attendance rates of the lowest, middle and upper third of pupils. These are expressed as deviations from the grand-mean attendance rate, low = –3.826, medium = 1.973 and high = 5.744. As might be expected, the general pattern for the effect of increasing attendance is one of improvement to the fitted achievement score. Thus, even amongst those who were rarely read to at home before they started at school, attendance in Third class has a noticeable association with achievement

Table 11.8: Contributions to fitted scores for Attendance by Frequency of Reading Before Schooling

Reading Before School	Attendance at School		
	Low	Medium	High
Daily	−1.948	0.420	1.508
Weekly[#]	−3.842	−2.842	−2.383
Monthly[#]	−4.937	−5.432	−5.659
Rarely	−8.682	−3.681	−1.381

Standard errors of the interaction parameters suggest no evidence of different attendance slopes for the 'monthly' or 'weekly' groups in comparison with the 'daily' group.

The slight deterioration of scores going across the table for the monthly level of pre-school reading experience is generated by a parameter estimate of almost the same magnitude as its standard error. Thus, the slope for Attendance within both the weekly and monthly Reading before Schooling levels is unlikely to be different from the daily level. It is in the case of the rarely level of Reading before Schooling that there is steeper improvement related to increasing Attendance, compared to the daily category. The decrease in scores associated with a rare frequency of Reading before Schooling, compared to daily Reading before Schooling, is 6.73 points for pupils with low

Attendance, while for those with high Attendance, it is 2.89 points. Intermediate values of the frequency of Reading before Schooling are also suggestive of lower scores of at least 3.26 points compared to daily reading, though the uncertainty in the interaction parameters for weekly and monthly makes more precise statements unwise.

Model Fits with Alternative Deprivation Context Measures

For comparative purposes, two alternative models with deprivation variables that had been used to create the composite School Deprivation Index measure – Percent of Pupils with Medical Card, and Percent of Pupils with Book Grant – were fitted. Both these variables are simpler to collect and it is of interest to see how they function as contextual measures of school deprivation for modelling achievement. The separate model fits of each to achievement scores were shown in Table 11.4, and, as reported earlier, gave worthwhile improvements to the model in comparison with the null random intercept model.

The first alternative model replaces School Deprivation Index and School Deprivation Index by Pupil Gender with the main effect Percent of Pupils with Medical Card and the interaction of Percent of Pupils with Medical Card by Pupil Gender. The fit is less good (AIC=15078.37) compared to that of the final model (AIC=15063.18) with 62.8% of the between-cluster (school) variation and 27.7% of the within-cluster variation (class and pupil combined) explained. This represents a deterioration of 5.9% and 1.7%, respectively.

The second alternative model also omits the School Deprivation Index and School Deprivation Index by Pupil Gender terms, and adds the main effect for Percent of Pupils with Book Grant and the interaction term Percent of Pupils with Book Grant by Gender. The fit is somewhat worse (AIC=15079.96), explaining 57.8% of between-cluster variation and 26.7% of within-cluster variation – a drop of 10.9% and 2.7% in the respective values, compared to those of the final model. Thus, Percent of Pupils with Medical Card appears to be a better context deprivation measure for modelling literacy scores than Percentage of Pupils with Books Grant, although the latter data are easier to collect as they are available centrally.

Implications of the Final Model

In this section, some implications of the final model for addressing the literacy needs of pupils in designated schools are considered.

Variance Components in Reading Achievement

At Third class level, 22.9% of variance in reading achievement is between-cluster (between-school) variance, while 77.1% is within cluster variance. The latter comprises variance attributable to differences between classes and between pupils. Taken together, the estimates of between-school variance obtained for Third class, and for the First and Sixth classes (18.1% and 13.5% respectively), can be interpreted as indicating that designated schools tend not to differ greatly from one another in terms of average reading achievement, and that most of the variation in reading achievement scores can be found in differences between classes and pupils (within schools). In the Third International Mathematics and Science Study (TIMSS), the proportion of variance in the mathematics achievement of students in second-year, post-primary level in Ireland that was attributable to differences between clusters was 50.0% (Martin, Mullis, Gregory, Hoyle & Shen, 2000). However, the sampling procedure used in TIMSS, in which just one class per school was selected to participate at each grade level, may be have led to a larger estimate of between-cluster variance than in the current study, as, in TIMSS, between-school variance included variance due to schools and classes.

The final model of reading literacy for third class in the current study explains 68.7% of between-cluster (school) variance (i.e., 68.7% of 22.9%), and 29.4% of within-cluster (class and pupil) variance. A model of reading literacy using PISA 2000 data (Shiel et al., 2001) explained 77.8% of between-cluster (school) variance, and 44.2% of within-cluster variance. In the PISA model, however, there were a few additional school-level variables including school disciplinary climate, and school type (Secondary, Community/Comprehensive and Vocational), as well as

additional pupil variables. None of the additional school-level variables in the current study, such as School Size, School Gender Composition, or Teacher Turnover, were included in the final model because they did not add to the explanatory power of the model once the School Deprivation Index (the composite measure of school disadvantage) was present.

School Context Effects

In the sample of designated disadvantaged schools in our study, the School Deprivation Index, which is interpreted in terms of its interaction with Pupil Gender, accounted for variation in achievement beyond that explained by individual Socioeconomic Status and other class- and pupil-level variables in the model. This supports Department of Education and Science policy in targeting schools with high levels of disadvantage. However, the Index also shows that there are some designated schools whose level of need is not as great as other disadvantaged schools.

The interaction between the School Deprivation Index and Pupil Gender shows that, while allowing for the other variables in the model, male pupils in the most deprived schools are particularly at risk relative to female pupils in similarly deprived schools, and to males in less-deprived schools. Indeed, the difference between the predicted scores of males and females in the most deprived schools is 5 score points (one-third of a standard deviation) in favour of females. This finding suggests that special attention should be paid to addressing the reading literacy needs of boys in the most disadvantaged schools.

The model confirms that the School Deprivation Index is a better measure of school-level disadvantage than Percent of Pupils with Medical Card or Percent of Pupils with Books Grant. However, the latter two are also useful measures of school-level disadvantage. Although Percent of Pupils with Medical Card works better than Percent of Pupils with Book Grant, the easier availability of the latter measure (which is reported annually by schools to the Department of Education and Science) may mean that it is more accessible to analysts and policy makers.

Pupils' Socioeconomic Status

In the current study, two measures of pupil-level social status and income, Socioeconomic Status (a measure based on parent occupations using the International Socio-Economic Index (ISEI)), and Medical Card access, were included in a model to which all pupil-level variables were added simultaneously. When a set of school-level variables, including the School Deprivation Index, was added to the model, pupil-level Socioeconomic Status was dropped, while Medical Card was retained. This suggests that, at the individual level, for pupils in designated schools, Medical Card is stronger predictor of achievement.

One reason why individual Socioeconomic Status (ISEI) may not have worked as expected in the current study is that there was a large number of missing cases, although we were able to classify many of these as 'miscellaneous low SES'. Another reason is that, while Socioeconomic Status emphasises the status associated with certain occupations (potentially weakening the association between parent income and pupil achievement), Medical Card is a more direct measure of income. In any event, the final model indicates that, adjusting for other relevant school- and pupil-level variables, pupils with a Medical Card score 3 points (one-fifth of a standard deviation) poorer than their counterparts who do not have a Medical Card.

Reading at Home Before Formal Schooling Begins

The importance of providing early opportunities at home for the development of the language and literacy skills required for success in school was stressed in the literature review in Chapter 1. In particular, it was pointed out that reading aloud to children provided opportunities for the development of important concepts about print, as well as opportunities to develop vocabulary and listen to more complex sentence structures. The final model of reading literacy confirmed the importance of reading to children at home before the start of formal schooling. However, the effects of reading at home can only be interpreted in the context of an interaction with attendance at school (measured during the third quarter of Third class). The model indicates that pupils with low attendance who were 'hardly ever or never' read to achieve scores that are 6.73 points (over two-

fifths of a standard deviation) lower than those with low attendance who were read to at home every day before schooling began. While it is acknowledged that just 6% of pupils in Third class fall into the 'rarely or never' category, and these are distributed across the three levels of attendance, it is apparent that, among these pupils, those with poor attendance are particularly at risk. The finding also confirms the importance of regular school attendance. While parents might be expected to ensure that pupils arrive at school on a regular basis, it is acknowledged that some parents may need support with this. Hence, this finding indirectly supports policy initiatives designed to promote regular attendance at school.

The finding that the attendance slopes for pupils who experienced 'weekly' and 'monthly' levels of reading at home before formal schooling are not reliably distinguishable from that for pupils who experienced daily reading is perhaps surprising. However, the minimum effect of these intermediate levels of reading at home is a 3.26 points deficit, compared to daily reading. Hence, the general pattern in the data derived from the final model can be taken as supporting the view that both reading to children before formal schooling, and ensuring that they attend school every day, are important. It must, of course, be acknowledged that parents were asked to indicate retrospectively the frequency with which their child had been read to before the beginning of formal schooling. Nevertheless, the consistency in patterns of parent responses to this question across class levels (see Chapter 6) and the consistent associations with achievement would appear to confirm the utility of this variable.

Number of Books in the Home

It is also of interest to observe the contribution to reading scores of the number of Books in the Home Score in the context of the final model of reading literacy, since this variable may also reflect literacy activities in the home. The data suggest that, adjusting for other relevant variables, pupils with greater numbers of books in the home perform better than those with fewer books. For example, the difference in predicted reading achievement between pupils with 250 or more books in the home, and those with zero books is 11.7 points (over two-thirds of a standard deviation). One explanation of this relationship is that the number of books in the home operates as a proxy for some other variable such as the level of educational interaction between parents and children. It might be assumed, for example, that the availability of large numbers of books might lead parents to discuss the content of those books more frequently with children. Or children in homes with many books may simply be more likely to read books, as more books are available to them. However, it may also be the case that children who enjoy reading books are more likely to buy, or get their parents to buy, books, thus increasing the number of books in the homes of such children. Given the apparent explanatory power of this variable, it is worthy of further exploration.

An important finding in Chapter 6 is that 22.4% of children in Third class have 10 or fewer books in the home. This suggests that, despite relatively easy access to books in the community, many children in designated schools do not have a plentiful supply of books available to them at home at an age when they are moving away from learning basic reading skills and need materials on which to develop reading fluency and higher-order comprehension skills. This suggests a need to provide some families with a grant to enable them to purchase suitable children's books, perhaps on an annual basis.

Number of Siblings

The final model of reading literacy indicates an effect for Number of Siblings on reading achievement. The parameter estimates for Number of Siblings show that, relative to pupils with one sibling, there are small negative contributions to achievement for pupils with no siblings and for those with 2 siblings. The negative contributions to achievement are somewhat larger for pupils with 3 siblings (–2 points) and pupils with 4 or more (–3.7 points, or just over one-fifth of a standard deviation). This suggests pupils from larger families may be particularly at risk where reading achievement is concerned, and that schools may need to take this into account in making provision for their needs.

12. Summary and Recommendations

This chapter summarises some of the main findings of the report and offers recommendations on how reading standards among pupils in designated disadvantaged schools might be improved.

Summary of Main Findings

In this section, the reading achievements of pupils who participated in the literacy survey are reported and compared to national standards. Variables associated with achievement, such as home, school and classroom characteristics, are then described. Following a summary of views obtained from parents and teaching staff, a multilevel model of achievement at the Third class is reviewed.

Achievement of Pupils in the Literacy Survey

The reading achievements of almost 6,500 pupils in First, Third and Sixth classes in designated disadvantaged primary schools were assessed in May 2003 using a standardised test of reading, the *Drumcondra Sentence Reading Test* (DSRT). At each grade level, pupils in the survey performed less well on the DSRT than pupils in a representative national sample who had participated in the standardisation of the test one year earlier. There were substantial differences – about two-thirds of a standard deviation at each grade level – between pupils in the standardisation and literacy survey samples. Not only did pupils in the literacy survey achieve lower mean scores, but the percentages of pupils who achieved scores at or below the 10th percentile were considerably higher than at standardisation. Twenty-seven percent of First and Sixth class pupils, and 30% of pupils in Third class achieved scores at or below the 10th percentile (compared to 10% at each class level in the standardisation sample). As the 10th percentile is the marker commonly used to identify pupils in need of learning-support or other additional support, it can be concluded that between a quarter and a three-tenths of pupils surveyed qualify for support. Conversely, very few pupils in the survey could be described as having high levels of reading achievement. Just 4% of pupils in First class, and 3% in both Third and Sixth classes, achieved scores at or above the 90th percentile.

The magnitude of the difference in achievement between pupils in the literacy survey and standardisation samples was constant across class levels. The achievement gap does not increase with grade level, even though other work suggests the gap might widen (e.g., Martin, 1979; Stanovich, 1986; Weir, 2001). At each grade level, teachers rated at least one-third of their pupils as having either a basic or a weak standard of oral language, reading, or writing. There is a strong association between teacher ratings and pupil achievement (e.g., First class pupils described as having an advanced reading standard achieved a mean score of over two-thirds of a standard deviation higher than those described as having a weak standard). Similarly, both parents' ratings and pupils' self-ratings of their performance in English correlated positively with achievement. Among pupils, the strength of the correlation increased over time, supporting other research that indicates that, as pupils grow older, they are better able to gauge their own ability (e.g., Nicholls, 1979). Nonetheless, only a minority of pupils at any grade level described their reading skills as 'not so good' (5% at First class) or not as good as most of their classmates (16% of Third and 23% of Sixth class pupils).

Pupil Characteristics

Small, but significant, gender differences in mean score achievement (favouring girls) were found for First and Third class pupils. Pupil age averaged 7 years and 4 months in First class, 9 years and 5 months in Third, and 12 and a half years in Sixth class. At each grade level, there was a minimum difference of three years between the oldest and youngest pupils in the study. Most pupils were born in Ireland or the United Kingdom, while less than 3% spoke a language other than Irish or English when at home. A similar percentage were members of the Traveller community or were from refugee or asylum-seeking families. With the exception of pupils from the Traveller community, who

achieved considerably lower mean scores than their classmates, none of these pupil background characteristics was consistently associated with achievement differences.

Most pupils had attended Early Start or another pre-school programme, and the 7% of Sixth class pupils who had attended Early Start achieved significantly poorer mean achievement scores than those who had attended another form of pre-school. However, it is likely that this simply reflects the very disadvantaged circumstances of Early Start attendees. Most pupils regularly completed English homework, and those who did performed better than those who hardly ever did homework. Only 5% of First class pupils, but 15% of Third and Sixth class pupils attended homework clubs. Achievement was poorer among Third and Sixth class pupils attending clubs than among those not attending, suggesting that those attending were most in need of assistance.

Pupils' average school attendance rate was 90%, but there was considerable variation, and a small minority had attendance rates of less than 50%. As attendance was calculated for the quarter from January to March only (thereby excluding the typically poorer attendance periods of just prior to and following school summer holidays), it is likely that the average *annual* attendance rate amongst pupils in the survey was somewhat lower than that reported. Fewer than one in ten pupils at any grade level was rated by a teacher as having poor or very poor behaviour in school, but up to 25% in First class were described as having poor or very poor attention or concentration. Teacher ratings on these variables, and for pupil participation in class, persistence, and ability to work independently are all significantly associated with achievement.

Most pupils regularly read for fun, and frequency was positively related to reading achievement scores for Third and Sixth class (First class pupils were not asked to specify frequency). Most pupils also reported that they liked, and wanted to do well at, reading. These pupils, and those whose parents agreed that their child enjoyed reading, obtained higher mean scores. In contrast, there was no clear relationship between liking school and achievement.

Between 8% and 14% of pupils were described by teachers as having been diagnosed with a learning disability in English, and, while most of these were in receipt of resource teaching, in Sixth class, more than one quarter were not. Between 24% and 31% of pupils were described by teachers as in need of learning-support. Approximately one-third of Sixth class pupils so described were not receiving support, possibly reflecting a focus by schools on earlier intervention. Pupils diagnosed as having a learning disability in English, or perceived to be in need of learning-support, performed significantly poorer than other pupils. College attendance was the most common educational aspiration and expectation for Third and Sixth class pupils. Aspiration and expectation are both related to achievement. Pupils who want or expect to remain in the education system longer have higher mean scores.

Home Environment

The slightly less than one-third of pupils who lived in a lone-parent household (almost all female-headed) had lower mean achievement scores than those living in other types of household. Pupils typically had fewer than three siblings; number of siblings was negatively correlated with achievement. Up to 24% of pupils lived in households where no parent was employed, up to 31% had at least one parent who was an early school leaver, and approximately half were covered by the medical card scheme. Parental unemployment, medical card possession and having a parent who left school without any qualification were all associated with lower achievement scores. Parental occupations were assigned ISEI (International Socio-Economic Index) scores, which clustered around the lower end of the scale. Pupils from families with relatively higher ISEI scores tended to have higher achievement scores.

Significant minorities of parents indicated that they read to their child no more than a few times a month prior to their child starting school, or while their child was in an Infants class. The frequency with which parents read to their child was positively associated with reading achievement. However, the relationship between *current* parent-child reading behaviour and achievement was less

clear. Most pupils (ranging from 99% in First class to 92% of those in Sixth) received help with English homework, typically from their mother. The duration of help was brief, usually less than 20 minutes a day, and the amount of help given was negatively associated with achievement.

Pupils' use of home-based educational resources (such as an atlas, dictionary or computer) was somewhat limited, and, even at Sixth class, half did not use an atlas at home, while 30% did not use a dictionary. Use increased with grade level, and greater use of resources was associated with higher achievement. Approximately a quarter of pupils had between none and 10 books in their homes, compared to less than 10% of Irish students in the PISA 2000 survey (Shiel et al., 2001), and there was a clear positive relationship between the number of books in the home and achievement. However, most parents indicated that someone in the household was a member of a public library, a factor that was also associated with pupils' higher achievement. Parental expectations for their child's educational attainment were reasonably high. Slightly less than half expected their child to go to college, while less than 1% expected them to leave before the Junior Certificate. As with pupils' own expectations, higher parental expectations were associated with higher pupil achievement.

Classroom Environment

Most pupils were taught by female teachers in single grade classrooms. Greater proportions of First than of Third or Sixth class pupils were taught by teachers employed on a jobshare or part-time basis, or by teachers who did not have a basic teaching qualification, or an additional qualification. Number of years teaching experience was positively correlated with pupil achievement. First class pupils' parents were most likely to meet their children's teachers in a typical week, and most likely to be expected (by the teacher) to help with English homework and engage in paired or shared reading.

In the 2002/03 school year, approximately one-third of pupils' teachers had attended ICD (in-career development) courses in English. Significant minorities rated various courses they had attended as not very useful. Identifying and dealing with reading difficulties were the two topics most frequently selected as areas in which ICD was needed. Almost two-thirds of teachers indicated that if extra time were available to teach English, they would use it to improve pupils' oral language skills. Own lesson plans, pupil textbooks and the primary school English curriculum were most frequently cited as having a great influence on English lessons, while class readers and workbooks or worksheets were by far the most commonly used resources.

English lessons averaged an hour a day, of which between 20 and 27 minutes were devoted to reading. However, if time spent on classroom management is excluded, less than 20 minutes a day was actually spent on reading *instruction*. While the duration of a typical English lesson is negatively associated with achievement, the association is not significant for Third and Sixth class if reading instruction time only is considered. The percentage of time spent in whole class teaching increased from First through Third and Sixth classes, and there was a small positive association between it and pupils' reading achievement. The percentage of time spent on classroom management (as opposed to instruction time) showed only a weak negative correlation with achievement. Most pupils were assessed by their teacher on a weekly basis, using a teacher-made test (e.g., a spelling test), and on an annual basis, with a standardised group test. Other forms of assessment, such as profiles, checklists and progress tests were used far less frequently. Homework was assigned on four days a week to at least three-quarters of pupils at each grade level.

Teachers were generally very positive about school climate measures such as the sense of community among the staff, teacher morale, being able to ask for help if they had a problem, and attitude towards professional development. However, opinions were mixed on the clarity of goals and priorities for staff development, the effectiveness with which school resources were used, and the consistency with which the school's disciplinary policy was applied. Relationships between selected classroom variables (e.g., class size) and pupil achievement were strongest at First class and weakest at Sixth class.

School Environment

School size ranged from 12 to 774 pupils, averaging just over 200 pupils. The average annual school attendance rate was 89%, ranging from 70% to 95%, and attendance was positively correlated with mean school achievement at each of the three grade levels. Five percent of teaching staff were unqualified, and teacher turnover averaged a quarter of staff over the two years prior to completing the survey. However, in 8% of schools, turnover exceeded 50% of staff. Forty percent of principals reported that it was very difficult to fill vacancies with qualified staff, but just over half reported no difficulty in retaining qualified staff.

An average of 15% of pupils per school were in receipt of learning-support, with principals estimating that 26% were in need of such support. There was considerable variation between schools on these measures, with the proportion in receipt ranging from zero to 33% of a school's enrolments, and the proportion perceived to be in need varying from zero to 70%. As might be expected from a sample of designated disadvantaged schools, pupils from low SES backgrounds were over-represented. For example, half of pupils were covered by the medical card scheme, 75% qualified for the School Books for Needy Pupils scheme, up to 25% had no employed parent, and up to 30% had at least one parent who was an early school leaver, while, using the ISEI scale, a large proportion of pupils was classified as being from a low SES family.

Low parental literacy levels, inadequate psychological services, lack of parental support and of pupil interest, large classes, and shortage of learning-support were most frequently mentioned by principals as serious obstacles to the teaching of reading. Almost all schools had School Plans for English, typically developed with little involvement of the Board of Management or of parents. Most schools had written school policies for the identification of pupils with learning difficulties, the teaching of English reading and writing, and pupil assessment, but only a minority had written policies for school and teacher self-evaluation. Most schools also had a policy of at least an annual assessment of pupils using standardised tests, or early-screening tests in the Infants classes.

Support programmes for parents were common, with parents of pupils in the Junior classes most likely to be targeted. Just over half of schools had after-school programmes for pupils (generally in Senior classes) and/or their parents, and most were funded by either the School Completion Programme or Local Area Partnerships. Almost half of schools used adult volunteers to support the teaching of reading during school hours (typically in Junior classes), while a quarter used adult volunteers in after-school programmes (typically for pupils in Senior classes). Almost all schools had a library in each classroom, and supplemented their stock of books by using the Local Authority library service, while just over half also had a school library. Every school surveyed had a computer; the average pupil-to-computer ratio was 10:1.

A number of school-level variables were related to achievement: school-level attendance rates; the proportion of pupils in need or in receipt of learning-support or who had been assessed by a psychologist; the extent of teacher turnover; attendance rates at parent-teacher meetings; and the proportion of a school's enrolment that was female. School-level variables relating to medical cards, the books grant, ISEI, and early school leaving, were all strongly intercorrelated, and significantly related to achievement, as was a composite school deprivation index based on these variables.

Learning-support

Most learning-support teachers were female; had considerable teaching experience; and averaged six years experience as learning-support teachers. Half had never completed a recognised course in learning-support or remedial education, and almost two-thirds had not attended any ICD course related to teaching English in the 2002/2003 school year. The average caseload was 32 pupils. Learning-support teachers' work was very much concentrated on providing support in English. Although most of their time was spent with pupils withdrawn from their classes, almost 20% was taken up with timetabling, preparation and record keeping, coordinating the identification of pupils with learning difficulties, and liaising with class teachers about pupil needs.

Resource shortages did not appear to affect significantly the delivery of learning-support; at any rate, most teachers reported having an adequate supply of textbooks, workbooks, appropriate library books, and resources for teaching word identification or phonics. However, approximately two-thirds indicated that provision of learning-support was hampered by lack of support from some parents, large caseloads, and insufficient ICD. Of course, this does not necessarily mean that some parents provided no support, but may indicate that the form of support offered by parents was not what learning-support teachers wanted.

Approximately one-quarter of learning-support teachers indicated that support in English either rarely or never featured on the formal agenda for staff meetings in their school, and that teachers in the school were unfamiliar with the *Learning-Support Guidelines*. However, large majorities found the *Guidelines* useful, and felt that they were being implemented in their school. There appeared to be reasonable levels of consultation with class teachers and with HSCL co-ordinators, but views were mixed on the extent to which consultation with HSCL co-ordinators took place to identify how parents could help their children achieve learning targets. Furthermore, one-third felt there was not a high level of co-ordination between classroom and learning-support reading programmes, and most felt that reading programmes were primarily the responsibility of class teachers. Only one in ten felt that the learning-support programme was 'very integrated' with other programmes targeting disadvantage in the school. Many suggestions were offered for improving the *Guidelines*. Half felt that they should be modified to improve consultation between learning-support teachers and class teachers and parents. Other common suggestions included more human resources (typically more learning-support teachers or speech and language therapists) and improvements in ICD, including the provision of ICD on reading difficulties for all teachers.

Views of Teachers and Parents

Semi-structured group interviews were carried out with principals, teachers and parents in an urban and provincial town/rural location (henceforth referred to as the 'country' location) to establish their views on issues related to the reading achievements of pupils in designated disadvantaged schools. There were distinct differences between respondents in the two locations regarding the availability of resources (human and material), and the nature and extent of home-school interaction. Staff in the country location felt they had inadequate resources for teaching English, particularly oral language, while urban staff were generally satisfied with the available resources. There were numerous after-school clubs in the urban location, but only one homework club in the country area (and that was described by parents as very poorly run).

Parents appeared to be much more involved in school life in the urban location, and could avail of a variety of courses. Parents in the country area felt less comfortable than their urban counterparts in visiting the school, and said that the school gave them very little advice as parents. However, in both locations, the HSCL co-ordinator was highly praised. The views of teaching staff split along similar lines to the views of parents: urban teachers felt that parents were welcome in the school and that most would be comfortable approaching a teacher, whereas teachers in the country location felt that parents did not really engage with the school. Parents and teaching staff in both areas were of the view that pre-school benefited children. Parents also felt that pre-schools helped them to gain a better understanding of the requirements of primary school, while teachers felt that children who attended pre-schools were better prepared to meet the requirements of Junior Infants.

Most of the principals and teachers thought that the 2001 National Anti-Poverty Strategy (NAPS) target of halving the number of pupils with serious reading difficulties in designated schools was not achievable. Reference was made to lack of adequate levels of additional support for pupils with reading difficulties, and to the view that anything the school does is constrained by conditions in pupils' homes. Most schools did not seem to have very specific school-level targets for reading, nor did most class teachers have specific targets for their class, suggesting that target-setting was not prioritised in school planning. In contrast, learning-support teachers had very specific targets for their pupils. All teaching staff agreed that reading and oral language skills were the joint main priorities in their schools, but there did not appear to be any systematic evaluation of the effectiveness of schools'

approaches to addressing reading or language deficits. All schools used standardised tests to assess pupil progress, typically on an annual basis. Test results were seen as useful by principals, who tracked progress from year to year, but of little use by class teachers, as they were administered towards the end of the school year. Some interviewees suggested that a test with January norms would be helpful, as would an early screening test of oral language competence.

The service provided to schools by the National Educational Psychological Service was perceived to be inadequate, both in terms of the assessment resources allocated to schools, and the recommendations resulting from assessments. Learning-support teachers were perceived to be providing valuable additional support to pupils, although the resources available were considered inadequate to meet demand. Difficulties in arranging formal meetings between class and learning-support teachers were repeatedly raised. Although the principals interviewed were in charge of schools where a large proportion of pupils were in need of learning-support, none had adopted a model of learning-support that differed from the standard model (withdrawing pupils from classes in groups or individually) which might be considered more appropriate for schools with smaller proportions of pupils in need of additional support.

The English curriculum was criticised by teaching staff as being too vague and theoretical, with an emphasis on oral language that, while welcome, was not supported by adequate ICD. More generally, pre-service teacher training was criticised for an insufficient emphasis on how to teach reading. Class teachers identified the teaching of reading as one of the areas in which they felt inadequately trained, while principals identified it as an area in which they felt newly-trained teachers were deficient.

Some of the many suggestions made by interviewees as to how reading achievement could be improved were made repeatedly. These included the need to provide early intervention (in the form of pre-school programmes, and faster response times to identified pupil difficulties) and to promote greater parental involvement (through parental literacy initiatives and better information from schools to parents). Improved pre-service training in relation to teaching reading was also suggested, as was the need for extra material and personnel resources.

Model of Reading Literacy

A hierarchical multilevel model of reading literacy for pupils in Third class was developed to identify the simultaneous contributions to achievement of a set of school- and pupil-level variables described in earlier parts of the report. Prior to implementing model-building procedures, it was estimated that the proportion of variation in achievement that could be attributed to differences between clusters (schools) was 22.9%, while that attributed to within-cluster differences (classes and pupils) was 77.1%[1]. This, and the corresponding values obtained for First and Sixth classes (18.1% and 13.5% for between-school variation, respectively), indicate that considerably more variation in achievement can be attributed to differences between classes and pupils than to differences between schools.

In building the model, priority was given to variables that were of high policy or theoretical interest and those with the strongest associations with reading achievement. The model went through a number of iterations before the best explanation of achievement emerged, balancing complexity and goodness of fit. The final model included one school-level variable, a composite school deprivation index, and a number of class/pupil-level variables, including attendance, the number of books in the home, the frequency of being read to at home before formal schooling, medical card possession, and number of siblings. There were also interactions between the school deprivation index and pupil gender, and between reading before formal schooling and attendance at school.

The model portrayed the effects of both school- and pupil-level socioeconomic variables on reading. The effect of the school deprivation index needed to be interpreted in the context of its

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[1] Total variation in scores is split into that which can be explained by schools, and that which can be explained by classes and pupils. The estimates found for between-school variation can be interpreted as indicating that differences in achievement *between* schools are small, relative to differences *within* schools.

interaction with gender. Boys attending a school with a high level of deprivation had fitted scores that were 5 points (one-third of a standard deviation) lower than girls attending such a school, and almost 10 points (two-thirds of a standard deviation) lower than boys attending a school with a low level of deprivation. Medical card possession was included in the model as a measure of parent income. A pupil whose family had access to a card was expected to achieve a score that was some three points (one-fifth of a standard deviation) lower that a pupil whose family did not have access. The model also confirmed the importance of reading to children before the start of formal schooling, and showed how this interacted with school attendance. A pupil with poor attendance who was read to at home on a daily basis before the beginning of formal schooling had a fitted score that is some 7 points (almost one-half of a standard deviation) larger than the fitted score of a pupil with low attendance who was rarely read to at home. The number of books in a pupil's home was also found to be associated with achievement; pupils with more books in the home had higher fitted scores than pupils with few or no books.

Recommendations

In this section, we provide recommendations, summarised at the end of the chapter, on a number of topics. Although a broad range of topics are covered, including home-school relations, the NAPS literacy targets, and the identification of educational disadvantage, most of our recommendations focus on the work of schools and teachers. This should not be interpreted as implying that all or most of the responsibility for improving reading standards rests with the educational system, or that there is not a need to address the wider context of educational disadvantage. However, since the current survey was conducted on behalf of the Department of Education and Science, and there is evidence of variation in achievement between and within schools, the educational system is central to our recommendations.

Schools as Part of a Broader Strategy

Throughout this report, the data show the importance to reading achievement of variables beyond the immediate influence of the educational system, such as family socioeconomic status and a literacy-rich home environment. This suggests that strategies to redress educational disadvantage in general, and literacy difficulties in particular, need to extend beyond schools and the Department of Education and Science if they are to be successful. While there are many possible elements to such strategies, three are essential: greater integration between schools and other services; intensive family support programmes for very vulnerable families; and greater availability of adult and family literacy programmes.

Firstly, we propose that stronger linkages be developed between the 'formal' education system and programmes offering additional support (educational and otherwise) to parents. Schemes such as HSCL, Breaking the Cycle and the School Completion Programme have had some success in this regard. However, there is considerable variability in the extent to which Irish primary schools are integrated into networks of service provision for children and their families, and integration can fall short of what is required, particularly amongst smaller schools (Eivers & Ryan, 2000).

Secondly, it is self-evident that it is harder for parents to address their children's educational needs if they are also struggling with financial difficulties, unemployment, addiction, relationship problems, or psychiatric difficulties. We believe there is merit in the more holistic type of approach adopted by programmes such as the Department of Health and Children-sponsored Springboard programme and Family Resource Centres. However, despite Springboard's success in many areas, it has not led to noticeable improvement in children's school attendance or coming to school on time (McKeown, Hasse & Pratschke, 2001). Unfortunately, the programme evaluation did not examine any achievement-related variables, so conclusions cannot be drawn about the effects, if any, of participation on achievement. We suggest that a Springboard-type programme, but with a stronger focus on children's educational needs, would be beneficial for very vulnerable families. Greater involvement from the Department of Education and Science and schools in the planning of such programmes, and greater involvement of schools in their implementation would be appropriate.

Thirdly, given the high rate of early school leaving amongst parents in our study, a significant number of parents of children attending designated schools are likely to have literacy difficulties. Indeed, half of principals indicated that parent literacy levels 'very much' hampered the teaching of reading in their school. Most of these parents do not need the broader type of support offered by family support services, but would benefit from adult literacy services. Promoting literacy amongst parents is an essential component of any strategy to improve literacy levels amongst pupils. We suggest that adult literacy be promoted through widely accessible adult and family literacy programmes, and as part of a more intensive family support programme.

Recommendation:

Schools alone cannot redress educational disadvantage. Integrated family support programmes, with the full involvement of schools and with an increased emphasis on educational needs, should be more widely available. Parents with literacy difficulties should be encouraged to avail of literacy and family learning programmes (which should be readily accessible). [Recommendation 1]

Targets for Reading Literacy

In Chapter 1, we outlined some significant problems with the 2002 NAPS target of halving the proportion of pupils with serious reading difficulties by 2006. These problems concerned the lack of a definition of serious reading difficulties, lack of a specified target group, and an unrealistic time frame. To address these problems, firstly, in the absence of a definition, 'serious reading difficulties' may be operationally defined as reading achievement scores at or below the 10th percentile on standardised tests. Secondly, we propose that the target (which does not specify disadvantaged schools) be replaced by one specifically aimed at pupils in designated disadvantaged schools, as suggested in the 2001 Goodbody NAPS framework document. Thirdly, we suggest that halving the proportion of pupils at or below the 10th percentile by 2006 is too ambitious, and should be replaced by a more realistic target.

In our view, and in the view of most of the principals and teachers we interviewed, it would be extremely difficult to halve the number of pupils with difficulties by 2006. This is supported by the fact that other initiatives have to date had a relatively small impact on reading standards (though it can be argued that the primary focus of some of these initiatives was not the improvement of reading). Further, research on programme implementation (e.g., Fullan, 2001) suggests that it takes several years for new interventions to have maximum impact on learning outcomes. As we are proposing a number of refinements to existing initiatives, and the implementation of some new ones, we estimate that it will take a minimum of 10 years to effect a substantial change in reading standards. Thus, a more realistic target would be to halve (to 14-15%) the proportion of pupils at or below the 10th percentile in designated schools within 10 years. This long-term target should be supported by short-term system- and school-level targets (which should be consistent with national targets but appropriate to their own circumstances). Targets might also be devised for average and high-achieving pupils.

Recommendation:

The 2002 NAPS target should be replaced by a target specifically relating to pupils in designated schools. The new 10-year target should be to reduce to between 14%-15% the proportion of pupils in designated schools who score at or below the 10th percentile on a specified standardised test (with reference to 2002 national standards). The target should be supported by short-term targets, at system- and school-level, and targets for average and high-achieving pupils. [Recommendation 2]

A Stronger Focus on Literacy

While schemes designed to redress educational disadvantage (e.g., Early Start, Home-School-Community Liaison, Breaking the Cycle, Giving Children an Even Break, and the School Completion Programme) have attained some of their goals, their impact on pupils' reading achievements has, to date, been limited. However, this may be because none of them has had specific

targets linked to reading achievement. Evidence from three recent reviews of Irish intervention programmes confirms that they did not emphasise reading literacy to a sufficiently strong degree. Although the HSCL scheme seems to have had an impact on pupils' reading scores at the First and Third grade levels (Ryan, 1999), a recent review of the scheme noted that literacy was not prioritised in the way that it was in successful home-school programmes in other countries (Archer & Shortt, 2003). Similarly, while the most recent review of the Early Start programme reported considerable improvements to the programme since inception, it found scope for further improvement in a number of areas that could be expected to impact on children's subsequent literacy levels (Lewis & Archer, 2003). Finally, the evaluation of the urban Breaking the Cycle scheme found that three years after the introduction of the scheme, the amount of time spent teaching English had actually *decreased*, despite the fact that most schools in the scheme indicated that English was one of their main priorities (Weir, Milis & Ryan, 2002).

Data from our study support these findings. Most of the schools that took part were involved in least one of the intervention programmes listed above. However, English lessons averaged only about an hour a day, with less than 20 minutes a day being spent on actual reading instruction. This is more than the minimum time suggested in the primary school curriculum, but less than what could be allocated if discretionary curriculum time were allocated solely to English or to reading. None of the schools whose staff we interviewed had a policy on the amount of time to be allocated to teaching reading, despite general agreement that reading and oral language were the main teaching priorities. Indeed, responses on the Teacher Questionnaire indicate that a large minority of teachers disagreed that their school had a clear set of goals and priorities for reading.

We found a weak negative correlation between the duration of English lessons and pupil achievement (those with longer lessons tended to have lower reading achievement scores). However, this is likely to be because teachers typically spend more time teaching English to pupils with poor reading achievement. Shanahan (2001) argues that at least two hours a day need to be allocated to English reading and writing instruction in schools with a high proportion of disadvantaged pupils, while the Success for All programme includes 90 minutes of daily reading instruction, plus tutoring on a needs basis. Even if Irish primary schools allocated *all* discretionary time to English, the time allocated would fall short of these figures. We suggest that the minimum amount of time allocated to English lessons in very disadvantaged schools with low levels of achievement should be 90 minutes a day, initially at all grade levels. Over time, the positive effects of additional time in Junior classes may obviate the need to allocate 90 minutes to English lessons in Senior classes. We note that such a significant increase in the time allocated to English requires consideration of wider issues such as time apportionment across curriculum areas and the requirements of a balanced curriculum. In addition, greater emphasis should be placed on reading in other curriculum areas.

The increase in English lesson time should be supported by a substantive school-wide focus on literacy that does not appear to form part of current intervention programmes. Programmes need a much stronger emphasis on the development of pupils' oral language, pre-literacy and literacy skills, and on the involvement of parents in the development of such skills. We suggest the development of specific system-, school-, and programme-level targets in reading literacy and in aspects of teaching, learning and parent involvement related to achievement in literacy. We are aware that the Educational Disadvantage Committee has proposed 'a substantial shift away from the current programme-based approach' (2003, p.2) to a more holistic, school-centred approach. However, we believe that the principles and practices of current schemes will remain an influence for some time. Therefore, the need for a greater emphasis on literacy holds true, whether a programme-based approach remains in place or is replaced by a school-centred approach to funding.

Recommendation:

At least 90 minutes a day should be allocated to the classroom teaching of English in schools with high levels of disadvantage and low levels of achievement. This should be supported by a substantive school-wide focus on language and literacy that is considerably stronger than that found in current intervention programmes. [Recommendation 3]

Whole-School Approaches to Learning-Support and Reading

Research reviewed in Chapter 1 supports the view that schools with large numbers of disadvantaged pupils can be effective in improving pupils' reading skills. 'High-poverty' schools can improve pupil achievement by implementing school-wide restructuring programmes, such that every pupil and every teacher in the school is affected by the approach adopted. This is particularly relevant for schools in our study, where large numbers of pupils were perceived to need additional support (learning-support or resource teaching), yet where a significant minority did not receive it. The gap was most apparent at Sixth class, where only two-thirds of those perceived to need learning-support were receiving it (possibly reflecting a prioritisation of intervention at earlier grade levels).

One widely-proposed solution is the appointment of more learning-support teachers. We acknowledge that some schools need more posts, and that greater consideration needs to be given to the additional demands placed on learning-support teachers working in more than one school. However, we believe that a fundamental change in approach is also required in very disadvantaged schools. Models of provision that are appropriate for schools with, for example, 8% of pupils in need of assistance are not appropriate for schools where half of pupils need additional support. We note the proposal in the *Learning-Support Guidelines,* supported by international research, that schools where large numbers of pupils have serious reading difficulties should re-structure the provision of reading instruction and support services. We believe this to be particularly important in the Junior classes, and anticipate that a more intensive targeting of pupils at that level will lead to a significant decrease in the proportion of pupils in Senior classes who require learning-support. We also believe that re-structuring the delivery of learning-support needs to take place in the context of a broader re-structuring of the teaching of English in such schools.

Such re-structuring will require considerable expertise and effort, for which schools will need support. Therefore, we propose that literacy co-ordinators be appointed to work with schools to improve and re-structure the delivery of instruction in language and literacy. Co-ordinators could be attached to one of the DES agencies dealing with planning or curriculum, and work with three to four schools with large numbers of low-achieving pupils, over an initial two-year period. We envisage the main aspects of the work of co-ordinators to include:

- providing class teachers with ICD on the teaching and assessment of oral language, reading and writing, with an initial emphasis on the value of formative assessment, and how assessment outcomes should inform target-setting and teaching;
- working with school staffs to identify school-level targets in reading, strategies for achieving those targets, and ways of evaluating whether they have been achieved;
- supporting the HSCL co-ordinator in developing strategies for encouraging parents to promote oral language development, reading and writing at home and in the community; facilitating collaboration between support teachers on language and literacy issues;
- assisting schools in developing, implementing and evaluating additional programmes (e.g., after-school and summer programmes) which focus on language and literacy development;
- providing training, in conjunction with learning-support teachers, to classroom assistants and to volunteers, to enable them to play an appropriate role in the re-structured delivery of additional support to pupils.

Additional ICD and meetings should be supported by substitute cover, so that work with the literacy co-ordinator does not cause loss of instructional time for pupils. With the support of literacy co-ordinators, changes, based on international research findings (e.g., Success for All) can be made in the delivery of learning-support in schools with large numbers of pupils in need of additional help. Among these are:

- cross-grade groups (for reading classes only), composed of pupils in Senior Infants to Second class with similar levels of (regularly reviewed) reading achievement;
- reading groups assigned to class and support teachers on a rotating basis, so that most or all pupils have access to a support teacher for at least part of the school year;

- volunteer tutors, trained (preferably in groups) and mentored by the learning-support teacher and the literacy co-ordinator. Where parental literacy levels are poor, volunteers from the wider community (e.g., retirees or third level students) could be sought;
- individual or small-group tutoring, outside of English lesson time, to pupils whose progress in group (Junior classes) or Senior class settings is unsatisfactory, for a defined period of time; tutoring should be provided by the learning-support teacher, with appropriate assistance from trained volunteers or class assistants, and its effects carefully monitored.

Recommendations:

Literacy co-ordinators should be assigned to schools with large numbers of lower-achieving pupils to assist in implementing activities and programmes designed to improve reading standards. Substitute cover should be supplied so that teachers can work with the co-ordinator and with one another without loss of instructional time for pupils. [Recommendation 4]

Schools where large numbers of pupils have reading difficulties should be supported in re-structuring the provision of reading instruction and support services in ways that maximise the input from class and support teachers. [Recommendation 5]

Pre-Service Training / In-Career Development

Based on our data, we have three main observations in relation to teacher training. Firstly, pre-service training in relation to the teaching of reading is not fully meeting the needs of teachers or pupils. Secondly, ICD on identifying and dealing with reading difficulties is rated as of little use by a large minority of teachers. Thirdly, the increasing curricular emphasis on oral language is not adequately supported by teacher training.

Teachers in our interviews repeatedly discussed how pre-service training did not provide them with sufficient understanding of the processes underlying reading, and, in particular, the factors underlying emergent reading (views which were shared by principals). ICD did not appear to improve the situation. Questionnaire data indicated that up to half of class teachers rated ICD on identifying and dealing with reading difficulties as of 'not much use', compared to only 9% of learning-support teachers. Furthermore, interviews with class teachers revealed that many viewed ICD as too theoretical, and not appropriate for those working in disadvantaged schools.

The primary school English curriculum, introduced in 1999, has a strong focus on oral language development, particularly in the early years of schooling. It is apparent both from our questionnaire data and from our interviews with teachers that ICD also needs, as a priority, to have a stronger focus on oral language. Teachers interviewed in the small town/rural area, especially those who had qualified some years ago, expressed frustration at their lack of background knowledge on how to develop children's oral language, and commented on lack of resources for stimulating it. The fact that some teachers feel ill-equipped to develop oral language in the context of English lessons may also mean that they are not confident about teaching oral language across the curriculum, or about advising parents on how to use oral language interactions in the home to support literacy development. At all class levels, teachers who completed questionnaires mentioned oral language as a priority need for ICD in English. Indeed, 17% of pupils in First class, and 31% in Sixth class were taught by teachers who identified oral language as one of the main areas in which they needed ICD. Most teachers who had attended ICD courses in which oral language development was covered found such courses useful. Therefore, it seems that there is a reasonably good base on which to build further ICD experiences.

Just over one-third of pupils' teachers had attended ICD in reading in the school year in which our study was implemented. This contrasts sharply with patterns of attendance at ICD that are found in successful school reform programmes (e.g., Success for All) and in the literature on effective schools in reading (e.g., Taylor, Pressley & Pearson, 2002), where ongoing ICD in reading is very evident. Moreover, ICD in these contexts is school-based and comprises not just information

on teaching approaches but also opportunities to plan, to reflect on teaching practice, and to review the implementation of new teaching and learning strategies. School-based ICD might include staff meetings where policy can be reviewed and new approaches considered, and working groups to evaluate existing teaching / assessment practices and the potential of new approaches, or to develop plans in specific aspects of language and literacy.

Recommendations:

Pre-service courses on the teaching of reading need a greater focus on the development of reading, with greater attention paid to the needs of educationally disadvantaged pupils. [Recommendation 6]

Teachers in designated schools should participate in intensive, ongoing site-based professional development on the teaching of oral language, reading and writing. This should emphasise the processes underlying language and literacy, and allow for reflection on teaching approaches and practices. [Recommendation 7]

Assessment and Feedback

In this section, we describe three issues related to assessment and feedback: the perceived usefulness of standardised tests; the use of formative assessment; and providing feedback to pupils and parents on the outcomes of assessments. Firstly, teachers reported that existing standardised tests offered inadequate diagnostic information, and were administered too late in the school year, thus having little influence on their day-to-day planning. Kellaghan, Madaus and Airasian (1982) found that the provision of diagnostic, as well as norm-referenced, information to teachers was associated with improved pupil achievement, and that teachers were more likely to use and to impart test results to pupils and parents when diagnostic information was available. We suggest that the next generation of standardised tests should provide some level of diagnostic or descriptive information in conjunction with norm-referenced information. It would also be appropriate if they were amenable to administration some time soon after the beginning of the school year, as well as towards the end.

Secondly, although formative and summative assessment are not mutually exclusive, the latter typically refers to an assessment of *what* has been learned, whereas the former refers to the ongoing assessment of *how* pupils are learning, and to the subsequent use of this information to modify instruction. Our study provides evidence that summative assessments are a feature of classroom practice, but that other forms of assessment are less common (e.g., close to three-quarters of pupils' teachers never used curriculum profiles). Indeed, data from the Teacher Questionnaire suggest that most class teachers do not view increasing time spent on pupil assessment as a priority. This may be because the value of formative assessment has not been sufficiently highlighted in Ireland.

Our data are not detailed enough to allow conclusions about the efficacy of formative assessment (e.g., teachers were not asked for details about the type of feedback they provide to pupils). However, as outlined in Chapter 1, international research has established a clear relationship between the increased use of formative assessment and achievement gains. Effects seem strongest when pupils engage in self-assessment (Black & Williams, 1998), and when feedback procedures are structured (i.e., where teachers are given a set of concrete guidelines to follow in reviewing and acting upon assessments) (Fuchs & Fuchs, 1986). Black & Williams' (1998) finding that low-achieving pupils experience the strongest benefits suggests that formative assessment is an appropriate strategy for designated schools, where such pupils are over-represented.

We recommend that schools develop more specific policies relating to pupil assessment in general, and to formative assessment in particular. To facilitate this, a practical set of guidelines relating to formative assessment is required, together with additional ICD relating to formative assessment, and the provision of feedback to pupils, which focuses on the quality of an individual pupil's work (identifying methods by which work can be improved) rather than on the relative position of a pupil in his/her class. While the administration of standardised tests should remain a feature of assessment policies, the emphasis should be on regular administration of curriculum-based

assessment related to the specific objectives that have been established for pupils in key aspects of oral language, reading and writing.

Thirdly, there was a considerable gulf between the opinions of teachers and those of pupils and parents regarding current pupil achievements and future academic expectations. Compared to teachers, parents and pupils tended to be very positive. Entwisle and Hayduk (1978) found a similar disparity amongst disadvantaged pupils, and suggested it was due to the type of feedback given. Specifically, they believed that teachers overused praise and positive reinforcement with disadvantaged pupils, in the belief that it boosted self-esteem, which in turn was expected to improve reading achievement. Much criticism of the so-called 'self-esteem movement' comes from very conservative writers promoting a quite Victorian approach (see Kohn, 1994 for a review), where any concern about pupils' emotional well-being is attacked as detracting from promotion of academic development. Most teachers, quite correctly, do not endorse such an approach. Nonetheless, emotional well-being, by itself, is not the solution to all learning problems. The available evidence indicates that efforts to boost self-esteem do not improve achievement, and indeed, may sometimes be counterproductive (see Baumeister, Campbell, Krueger & Vohs, 2003 for a comprehensive review of research on the topic). It would seem reasonable to suppose that pupils who are given balanced and detailed feedback about their strengths, weaknesses, and areas where improvements can be made are in a better position (academically and emotionally) than those who only hear praise for effort. Similarly, one might expect that parents who know that their child has reading difficulties or delayed progress in reading are more likely to provide the extra help that is needed. We hope that the increased use of formative assessment will provide pupils and parents with a more comprehensive understanding of a pupil's strengths and weaknesses.

Recommendations:

Standardised tests should include some level of diagnostic or descriptive information, and have norms appropriate to the beginning and end of the school year. [Recommendation 8]

School policies on assessment should include a strong focus on formative assessment of oral language, reading and writing. The adoption of more frequent and structured formative assessment should be supported by a centrally-developed practical framework for class teachers, with associated ICD. Assessment outcomes should be used to provide detailed feedback to pupils and parents about pupils' strengths and weaknesses. [Recommendation 9]

Early Intervention and Early Childhood Education

There is a gap in average reading achievement of almost two-thirds of a standard deviation between First class pupils in designated and non-designated schools, a gap that persists throughout primary schooling. Over one-quarter of pupils in First class in designated schools have serious literacy difficulties, which may well manifest themselves at a much earlier stage. International and Irish research indicates that early academic ability (pre-school or at school entry) is strongly predictive of later achievement, and that children from disadvantaged families tend to start school with poorer academic ability than their more advantaged peers (e.g., Kellaghan, 1977; Najman, Aird, Bor, O'Callaghan, Williams & Shuttlewood, 2004; Ryan, 1994; Snow et al., 1998).

Given the importance of the pre-school years, it seems evident that early intervention programmes should have a role to play in preventing later literacy difficulties. The best known Irish early intervention programmes, and perhaps the most carefully evaluated, are the Rutland Street project and Early Start. While Early Start has had many positive effects, evaluations conducted up to 1998 suggest that it has had limited short- and medium-term effects on participants' achievement in reading (Educational Research Centre, 1998; Kelly & Kellaghan, 1999). In contrast, evaluations of the Rutland Street project (Kellaghan, 1977; Kellaghan & Greaney, 1993) found both short- and long-term positive effects in a range of areas. Early Start has been significantly modified in recent years. However, the effects of these changes on pupil reading achievement have not been formally assessed in the most recent evaluations (Lewis & Archer, 2002, 2003).

Reviews of pre-school programmes in other countries have found that, while most programmes produce only small effects on achievement, 'highly intensive full-day, year-round educational child care, beginning in infancy and continuing to school entry seems to produce the greatest long-term cognitive and academic gains for children in poverty, including large improvements in reading achievement' (Barnett, 2001, p. 439). Barnett also suggested that less intensive programmes could be of benefit if teachers are assisted in using approaches found to best develop pre-academic abilities and dispositions. Other comprehensive reviews (e.g., Boocock & Larner, 1998) support Barnett's findings and highlight the importance of a comprehensive or holistic approach (e.g., providing medical services and enlisting significant parental involvement). While intensive pre-school programmes can be expensive, cost-benefit analyses show that they can be good value for money (e.g., Karoly, Kilburn, Bigelow, Caulkins & Cannon, 2001; Masse & Barnett, 2002).

Many of the teachers and parents we interviewed advocated the extension of Early Start to all designated schools. Clearly, it would be desirable for all disadvantaged children to have access to a pre-school programme proven to be effective in stimulating reading development. However, we believe that any extension of Early Start should be contingent on addressing concerns in relation to the programme (see, for example, Lewis and Archer, 2002, 2003). In particular, the poor attendance of some pupils needs to be addressed, as does the fact that many attendees seemed to have achieved only beginning-of-year standards at the end of the school year (Lewis and Archer, 2003).

The Centre for Early Childhood Development and Education is currently undertaking a wide-ranging review and analysis of issues related to the provision of early childhood education in Ireland, including provision for disadvantaged children. Thus, we do not propose detailed recommendations about pre-school provision in advance of the outcomes of the Centre's deliberations. However, as broad recommendations, we suggest that provision of early childhood education be expanded from current levels, and that account is taken of the varying degrees of disadvantage found, even within disadvantaged areas. A more graded approach, where resources are allocated depending on degree of disadvantage, may prove useful. Such allocation could range from less intensive pre-school or playgroup programmes, to Early Start, to multi-faceted programmes of the intensity and duration that international research suggests is necessary for very disadvantaged children.

Recommendations:

Provision of early childhood education should be expanded, using a graded approach that takes into account the varying degrees of disadvantage. Any expansion of Early Start should address concerns raised in evaluations of the programme. [Recommendation 10]

Attendance

Our findings support those of other studies (e.g., Cosgrove et al, 2000; Kain & O'Brien, 1999) in highlighting an association between poor attendance and low achievement. Moreover, in our multilevel model of achievement, attendance was related to achievement, even after adjustments for other relevant variables had been made. The model also revealed an interaction between attendance and being read to at home before the beginning of formal schooling. One can infer from this interaction that a high attendance rate could, in certain circumstances, compensate for the effects of not being read to prior to formal schooling. Given this, it would seem that strategies to promote attendance and to deal with non-attendance are important aspects of efforts to raise achievement.

In its initial year in operation, the National Educational Welfare Board (NEWB) prioritised 18 cities and towns with high levels of disadvantage (although they will follow up on urgent cases outside of these areas), and focused on pupils aged 10 to 16 years (National Educational Welfare Board, 2003). There are two main reasons why this policy should be reviewed. Firstly, since the enactment of the Education (Welfare) Act 2000, rural areas and small towns have lost the services of Juvenile Liaison Officers, but the NEWB's focus on urban areas means that no adequate replacement exists (a point raised by principals interviewed in the country location). Secondly, the focus on ages 10 to 16, while covering the transition from primary to post-primary, and the years leading to the end

of compulsory schooling, means that problems of attendance during the critical years for language development and reading acquisition (6-9 years of age) may escape attention.

Pupils under the age of 6 do not come under the remit of the NEWB. Therefore, we propose that schools be supported in intensive targeting of those under 6 years of age, and that the EWOs target pupils identified as vulnerable as soon as they become 6, rather than waiting for a pattern of poor attendance to become established, post-compulsory attendance age. More broadly, the Education (Welfare) Act 2000 provided that EWOs should work in close co-operation with schools and other relevant parties to encourage regular school attendance and develop strategies to reduce absenteeism and early school leaving. We believe that this area of the NEWB's work should be strengthened. The NEWB should develop models of best practice on within-school methods of promoting attendance and dealing with persistent non-attenders, models that EWOs and schools can adapt to local needs. Also in a preventative vein, we recommend that the NEWB continue publicity campaigns such as that associated with the *Don't Let Your Child Miss Out* information leaflet, in order to raise public awareness of the importance of regular school attendance.

Finally, the assumptions underlying the work of the NEWB – that the activities in which they engage can reduce absenteeism and lead to improved pupil achievement – should be validated.

Recommendations:

The NEWB should develop models of best practice on within-school methods of promoting attendance and dealing with persistent non-attenders, which can be used by EWOs to support schools in developing and implementing measures to promote attendance. In particular, schools should be supported in intensive targeting of children under 6 years of age, and EWOs should target at risk pupils as soon as they reach compulsory school attendance age. [Recommendation 11]

The NEWB should strive to raise public awareness of the importance of regular school attendance, including the effects of attendance on achievement. [Recommendation 12]

The value of NEWB activities should be validated by research. [Recommendation 13]

Targeting Schools and Pupils

A number of our findings seem relevant to the work of the Educational Disadvantage Committee. First, evidence from the multilevel model of achievement indicates that the effects of being in a very deprived school are more negative for boys than for girls. Second, after accounting for effects of other variables, pupils with four or more siblings have poorer achievement than their classmates. Future attempts to identify disadvantaged schools might consider these findings. Third, a school's socioeconomic composition, while generally stable over a number of years, can change significantly if local factors change. Indeed, a small number of schools in the survey would not have been accorded designated status if designation had been based on their current enrolment, rather than on their socioeconomic composition when they were admitted to the Disadvantaged Areas Scheme. Similar anomalies were found in the case of some designated schools in Giving Children an Even Break. This suggests that the appropriateness of disadvantaged status being permanently maintained, once assigned, is questionable. We recommend that schools' socioeconomic composition be reviewed regularly, preferably using the proposed Primary Pupil Database, and that additional resources be assigned according to actual need.

Recommendations:

The number of boys in a school, and the number of pupils with four or more siblings should be considered as additional indicators to identify disadvantaged schools. [Recommendation 14]

Schools' socioeconomic composition should be reviewed regularly, preferably using the proposed Primary Pupil Database. [Recommendation 15]

Teacher Expectations

Interview and questionnaire data from our study indicate that teachers' educational expectations for many of their pupils were low. For example, teachers rated over a quarter of Third and Sixth class pupils as likely either to need assistance or to not cope at all with the reading tasks of post-primary school. In interviews, principals and teachers repeatedly referred to the disadvantaged nature of their schools' enrolments, to oral language deficits, and to the difficulty of teaching pupils even the most basic oral language and reading skills.

Teachers will feel that their expectations are not low, but a realistic and accurate reflection of what is likely to happen to their pupils. The difficulty, however, is not with the perceived accuracy of teachers' views, but with the effects they may have. While evidence from elsewhere indicates that raising teacher expectations can lead to raised pupil achievement (see Chapter 1), raising teacher expectations has not been a feature of any Irish intervention. Indeed, some argue that a side effect of the focus on educational disadvantage, and on factors such as the community and inter-generational effects of disadvantage, has led to greater pessimism about what pupils can achieve (Archer & Shortt, 2003; Archer & Weir, 2004). Some support for this argument comes from Weir's (2003) finding of an eightfold increase between 1997 and 2003 in the proportion of Sixth class Breaking the Cycle (urban) pupils excluded from testing (a simple indicator of low expectations) because their teachers thought they were too weak to take the test. Therefore, we propose that strategies to counteract low expectations should form a part of an overall strategy to deal with disadvantage.

Recommendation:

Strategies to promote high teacher expectations of pupils' achievement should be part of an overall strategy to deal with disadvantage. [Recommendation 16]

Attracting and Retaining Qualified Teaching Staff

Turnover in the schools in our survey averaged one quarter of teaching staff over the two years prior to the survey. National comparison data are unavailable, but the Breaking the Cycle evaluation found an average turnover of 48% between 1996/97 and 1999/2000 (Weir et al., 2002), while the INTO reported a turnover rate of 30% for *qualified* teaching staff in designated schools over the three year period up to the end of the 2001/02 school year (INTO, 2003). Thus, our turnover rates are not atypical for designated schools. Not all schools had staffing problems (11% had no teaching vacancies), and those that did were not necessarily the most disadvantaged schools. Further, conversation with some principals revealed that the vacancies in their schools were due to retirement or career breaks, illustrating that not all turnover is problematic. That aside, average turnover of 25% over two years is very high, and militates against coherent long-term planning and staff development.

Principals described 5% of teachers as unqualified, and 40% indicated that they had unqualified teaching staff. In comparison, the INTO survey (carried out in 2002) found that 10% of teachers in designated schools, and 3% of teachers nationally, were unqualified. Data from Breaking the Cycle schools gathered in April 2002 indicate that 72% of schools had at least one unqualified teacher, averaging 13% of teaching staff. The Breaking the Cycle data are limited to arguably the most disadvantaged schools, so it is unsurprising that we found a smaller percentage of unqualified teachers. However, the percentage is still lower than that found in the INTO survey, suggesting that the proportion of teachers who are unqualified has fallen (and may have fallen further in the past year). Anecdotal evidence from principals supports the view that, while it may still be difficult to attract qualified staff, the situation has improved somewhat in recent years.

Our data reveal a tendency for more disadvantaged schools to have higher turnover and more unqualified teachers. However, the relationship between achievement and the two variables was not as strong, particularly in the case of unqualified teachers. Indeed, the multilevel model found that when other factors were taken into account, the effect of turnover on achievement was not significant (unqualified teachers were not used as a variable in the final model due to the weak link with

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achievement). Thus, our findings do not provide clear evidence that high turnover and unqualified teachers have a negative effect on achievement. However, this may partly be due to the low proportion of unqualified teachers, and because the proportion in the schools in previous years was not considered. Moreover, we did not track individual pupils to examine if they had been taught by unqualified teachers, and if so, for how long. Evidence from other sources indicates that pupil achievement is linked to teacher qualifications (e.g., Darling-Hammond & Ball, 1997), and teacher turnover (e.g., Grissmer, Flanagan, Kawata, & Williamson, 2000).

In our study, the proportion of unqualified teachers is higher if only *class teachers* are considered (i.e., teachers with whom pupils spend the vast majority of time), and highest of all if only teachers of First class pupils are considered. Given that what is learned in First class is crucial for acquiring and developing reading skills, the fact that 13% of First class pupils were taught by an unqualified teacher is a worrying finding. Finally, less than half of the learning-support teachers surveyed had an additional qualification in the area of learning-support. While it can be argued that any qualified teacher can provide learning-support, it would seem preferable if learning-support teachers had an appropriate additional qualification.

The issues of teacher turnover and qualifications are currently being addressed by the Educational Disadvantage Committee. We do not therefore propose recommendations in relation to these issues, except to suggest that measures be taken to ensure that pupils in designated schools have access to qualified, experienced teachers.

Recommendation:

At the system-level, consideration should be given to implementing the recommendations of the Educational Disadvantage Committee in relation to teacher supply in the most disadvantaged schools. At the school-level, priority should be given to the Junior classes (Senior Infants and First class in particular) when assigning qualified and experienced teachers. [Recommendation 17]

The Home Environment and Literacy

Our survey found that pupils who were regularly read to before formal schooling began, or who regularly read to someone at home while in the Infant classes, were generally better readers than their classmates, with positive effects still observable in Sixth class. The multilevel model found that, even after the effects of factors such as parental educational attainment and SES are taken into account, reading to a pre-school child is positively associated with later reading achievement. One might infer that a high attendance rate in school can compensate for lack of early literacy interaction, and that pupils who were not read to and who have a low attendance rate are at an elevated risk of reading difficulty. The positive effects of early reading are found for *anyone* in the household regularly reading to the child, a finding particularly relevant to parents whose own literacy levels or educational attainment might constrain parent-child reading activities.

The number of educational resources in the home was also linked to achievement. Those who had home access to an atlas, a computer and a dictionary had the highest achievement scores, while those who had access to none of these had the lowest scores. There was also a very strong association between the number of books in pupils' homes and their reading achievement. Even when the multilevel model is adjusted for other relevant variables (including SES), pupils with greater numbers of books in the home perform much better than those with fewer books.

Given the evidence for the positive effects of a literacy-rich home environment on reading achievement, we suggest that an information campaign should be initiated to make parents aware of the importance of children being read to at a very young age, and of having books in the home. We also suggest that designated schools with Junior classes should be allocated funding to give 'starter packs' of books to their incoming Junior Infants classes, thus ensuring that pupils have a chance to experience books before they begin school. Such an approach should prove particularly beneficial for the almost one quarter of pupils in our survey who had 10 or fewer books at home. A book voucher

scheme for pupils in designated schools, enabling them to buy a few books each year, above and beyond their regular 'school books', should also be considered.

Recommendations:

An information campaign should be initiated to apprise families of the benefits of having a literacy-rich home environment. [Recommendation 18]

All designated schools with Junior classes should be allocated funding to give starter packs of books to their incoming Junior Infants classes. A book voucher scheme should be considered for pupils in other classes, to promote the purchase of books for leisure reading. [Recommendation 19]

Parent-School Interaction

Teaching staff recognised the importance of fostering home-school links and most agreed that their school tried to involve parents. Views from the interviews with teachers, principals and parents indicated that the HSCL scheme is perceived to be very successful in fostering home-school links, in encouraging many parents to become more involved in their child's school, and in helping parents and teachers to develop greater understanding. However, the difficulty of involving a core group of parents, whose children would benefit most from parental involvement in school-based activities, but who were least likely to participate, was a recurrent theme in the teacher and principal interviews.

From the perspective of the survey, Parent Questionnaire data were missing for about 10%-15% of pupils. Sometimes this was because an item on the questionnaire was unanswered, but, typically, it was because the pupils' parents had not completed or returned the questionnaire. We believe that many of these parents would be amongst those whom teachers felt were unreachable (informal comments from some teachers support this view). Our most consistent finding was that pupils for whom data are missing generally had significantly poorer reading achievement than those whose parents had returned a completed Parent Questionnaire. At the risk of stating the obvious, we suggest that schools need to pay particular attention to the literacy needs of these children.

While endorsing the work carried out by HSCL co-ordinators, we note that the co-ordinators themselves described almost 60% of the most disadvantaged parents as not involved in HSCL activities (Archer & Shortt, 2003). This suggests that additional methods of improving parental involvement need to be explored. As a starting point, we note Davies' (1991) caution that the term *parent* may be too narrow; where the most significant adult in a pupil's life is a grandparent, sibling or relative, these are the individuals that schools need to target. Liontos' (1992) review of strategies for improving home-school interaction identified a number of measures worthy of consideration. These include regularly scheduling parent activities outside of normal working hours, occasional use of non-school locations (e.g., community centres), and providing childcare or welcoming children to activities. She also suggests that face-to-face communication is preferable, and that any written communication should be short and simply written. Finally, she suggests that parents' rooms should be stocked with applications and forms relating to the practical needs of disadvantaged families. Furthermore, parents should know that they can get help in completing such forms (something already done on an informal basis by many HSCL co-ordinators). More generally, schools that are seen as part of the wider community will probably have less difficulty in fostering parental involvement. While such a characteristic is difficult to define operationally, making school facilities available to the community, after school hours, is one example of how schools can be perceived as part of a community.

Recommendation:

Further measures need to be taken to reach the parents of the most disadvantaged pupils, as many of this group remain uninvolved in their child's school-related activities. [Recommendation 20]

Future Directions for Research on Reading

Our study identified a number of areas in which there is a need for basic research that could inform efforts to promote higher reading standards in designated schools. There is a dearth of Irish research on methods of teaching reading in designated schools, particularly on the effects of different approaches to teaching pre-reading/beginning reading in Junior classes. Such research could examine the use of structured beginning reading programmes, the extent to which Junior class teachers modify their teaching practices in smaller classes, how classroom and learning-support activities are linked, and the extent to which assessment information is obtained and used in reading classes. There has been major growth in family and adult literacy programmes, as well as out-of-school programmes targeting disadvantaged pupils. It would be appropriate to have a more thorough examination of the effects of such programmes on participants' literacy levels, and to examine how they are co-ordinated with other school-based initiatives.

It is intended to replicate the current study in a sample of designated schools in 2006 (or later). However, consideration should also be given to tracking a sample of pupils over a period of years (for example, between Senior Infants and Second class), allowing pupils' reading literacy to be modelled using their progress or gain scores, rather than their current reading scores (as was done in this study). The resulting models would provide a clearer indication of the value that schools added to the development of pupils' reading literacy skills. They would also facilitate better identification of home and school practices that support reading development.

Summary of Recommendations

In this section, the recommendations arising from the study are given. As befitting our support for integrated and holistic approaches, the recommendations are designed to complement each other. None of them implemented in isolation is likely to result in wholesale change.

1.   Schools alone cannot redress educational disadvantage. Integrated family support programmes, with the full involvement of schools and with an increased emphasis on educational needs, should be more widely available. Parents with literacy difficulties should be encouraged to avail of literacy and family learning programmes (which should be readily accessible).

2.   The 2002 NAPS target should be replaced by a target specifically relating to pupils in designated schools. The new 10-year target should be to reduce to between 14%-15% the proportion of pupils in designated schools who score at or below the 10th percentile on a specified standardised test (with reference to 2002 national standards). The target should be supported by short-term targets, at system- and school-level, and targets for average and high-achieving pupils.

3.   At least 90 minutes a day should be allocated to the classroom teaching of English in schools with high levels of disadvantage and low levels of achievement. This should be supported by a substantive school-wide focus on language and literacy that is considerably stronger than that found in current intervention programmes.

4.   Literacy co-ordinators should be assigned to schools with large numbers of lower-achieving pupils to assist in implementing activities and programmes designed to improve reading standards. Substitute cover should be supplied so that teachers can work with the co-ordinator and with one another without loss of instructional time for pupils.

5.   Schools where large numbers of pupils have reading difficulties should be supported in re-structuring the provision of reading instruction and support services in ways that maximise the input from class and support teachers.

6.   Pre-service courses on the teaching of reading need a greater focus on the development of reading, with greater attention paid to the needs of educationally disadvantaged pupils.

7.   Teachers in designated schools should participate in intensive, ongoing site-based professional development on the teaching of oral language, reading and writing. This should emphasise the processes underlying language and literacy, and allow for reflection on teaching approaches and practices.

8.   Standardised tests should include some level of diagnostic or descriptive information, and have norms appropriate to the beginning and end of the school year.

9.   School policies on assessment should include a strong focus on formative assessment of oral language, reading and writing. The adoption of more frequent and structured formative assessment should be supported by a centrally-developed practical framework for class teachers, with associated ICD. Assessment outcomes should be used to provide detailed feedback to pupils and parents about pupils' strengths and weaknesses.

10.   Provision of early childhood education should be expanded, using a graded approach that takes into account the varying degrees of disadvantage. Any expansion of Early Start should address concerns raised in evaluations of the programme.

11.   The NEWB should develop models of best practice on within-school methods of promoting attendance and dealing with persistent non-attenders, which can be used by EWOs to support schools in developing and implementing measures to promote attendance. In particular, schools should be supported in intensive targeting of children under 6 years of age, and EWOs should target at risk pupils as soon as they reach compulsory school attendance age.

12.   The NEWB should strive to raise public awareness of the importance of regular school attendance, including the effects of attendance on achievement.

13.   The value of NEWB activities should be validated by research.

14.   The number of boys in a school, and the number of pupils with four or more siblings should be considered as additional indicators to identify disadvantaged schools.

15.   Schools' socioeconomic composition should be regularly reviewed, preferably using the proposed Primary Pupil Database.

16.   Strategies to promote high teacher expectations of pupils' achievement should be part of an overall strategy to deal with disadvantage.

17.   At the system-level, consideration should be given to implementing the recommendations of the Educational Disadvantage Committee in relation to teacher supply in the most disadvantaged schools. At the school-level, priority should be given to the Junior classes (Senior Infants and First class in particular) when assigning qualified and experienced teachers.

18.   An information campaign should be initiated to apprise families of the benefits of having a literacy-rich home environment.

19.   All designated schools with Junior classes should be allocated funding to give starter packs of books to their incoming Junior Infants classes. A book voucher scheme should be considered for pupils in other classes, to promote the purchase of books for leisure reading.

20.   Further measures need to be taken to reach the parents of the most disadvantaged pupils, as many of this group remain uninvolved in their child's school-related activities.

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Table A.1: Teacher rating of pupils parents/guardians' involvement in reading homework, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Very good	36.2	37.8	106.2	0.80	31.3	34.1	106.8	1.05	17.4	21.8	108.1	0.73
Good	28.8	30.1	100.6	0.94	25.8	28.1	101.2	1.20	26.0	32.4	103.5	0.92
Average	18.2	19.0	95.7	0.97	20.1	21.9	95.3	1.31	21.4	26.7	98.1	0.87
Below average	6.4	6.7	92.1	1.03	7.5	8.2	93.9	1.61	8.0	10.0	90.9	1.16
Poor	6.0	6.3	88.2	1.00	7.0	7.7	88.4	1.42	7.3	9.1	88.7	1.53
Not known	2.9	0.0	90.5	1.66	6.0	0.0	97.0	1.64	15.4	0.0	97.8	1.93
Missing	1.5	0.0	89.8	2.38	2.2	0.0	98.2	2.88	4.5	0.0	99.9	4.04
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
V. Good-Good	5.6	1.23	**2.1**	**9.1**	5.6	1.60	**1.1**	**10.1**	4.6	1.17	**1.3**	**7.9**
Average-Good	-4.9	1.35	**-8.7**	**-1.1**	-5.9	1.78	**-10.9**	**-0.9**	-5.4	1.27	**-9.0**	**-1.9**
Below-Good	-8.5	1.39	**-12.4**	**-4.6**	-7.3	2.01	**-12.9**	**-1.7**	-12.6	1.48	**-16.8**	**-8.5**
Poor-Good	-12.4	1.37	**-16.2**	**-8.6**	-12.8	1.86	**-18.0**	**-7.6**	-14.8	1.79	**-19.8**	**-9.8**
Not K-Good	-10.1	1.91	**-15.4**	**-4.8**	-4.2	2.03	-9.9	1.5	-5.7	2.14	-11.7	0.3
Missing-Good	-10.8	2.56	**-18.0**	**-3.6**	-3.0	3.12	-11.7	5.7	-3.6	4.14	-15.2	8.0

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table A.2: Teacher rating of pupils parents/guardians' interest in this child's progress in school, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Very good	38.1	39.6	105.8	0.82	36.5	38.9	106.2	1.11	29.4	32.4	107.4	0.79
Good	29.2	30.4	100.2	1.09	26.4	28.1	99.9	1.30	28.5	31.4	101.4	0.85
Average	16.7	17.3	96.2	0.78	19.0	20.2	95.0	1.26	20.9	23.0	95.4	0.92
Below average	6.9	7.1	91.0	0.89	6.1	6.5	92.0	1.50	6.0	6.6	90.1	1.24
Poor	5.4	5.6	88.6	0.91	5.9	6.3	89.4	1.25	6.0	6.6	86.1	1.27
Not known	2.5	0.0	89.6	2.00	4.1	0.0	97.1	2.26	4.7	0.0	96.5	3.64
Missing	1.3	0.0	90.1	2.66	2.0	0.0	98.0	3.19	4.4	0.0	100.0	4.11
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
V. Good-Good	5.6	1.36	**1.8**	**9.4**	6.3	1.71	**1.5**	**11.1**	6.0	1.16	**2.8**	**9.3**
Average-Good	-4.0	1.34	**-7.7**	**-0.3**	-4.9	1.81	-10.0	0.2	-6.0	1.25	**-9.5**	**-2.5**
Below-Good	-9.2	1.41	**-13.1**	**-5.3**	-7.9	1.98	**-13.5**	**-2.3**	-11.3	1.50	**-15.5**	**-7.1**
Poor-Good	-11.6	1.42	**-15.6**	**-7.6**	-10.5	1.80	**-15.6**	**-5.5**	-15.3	1.53	**-19.6**	**-11.0**
Not K-Good	-10.6	2.28	**-17.0**	**-4.2**	-2.8	2.61	-10.1	4.5	-4.9	3.74	-15.4	5.6
Missing-Good	-10.1	2.88	**-18.1**	**-2.1**	-1.9	3.44	-11.6	7.8	-1.4	4.20	-13.2	10.4

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table A.3: Teacher rating of pupils parents/guardians' awareness of what is happening in school, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Very good	33.0	34.8	106.1	0.93	32.2	34.3	107.2	1.13	25.8	28.8	107.6	0.84
Good	27.5	29.0	100.6	1.03	26.2	27.9	99.7	0.99	27.2	30.4	102.1	0.78
Average	21.0	22.1	97.4	0.98	21.1	22.5	96.4	1.31	21.9	24.4	96.4	0.88
Below average	7.2	7.6	91.8	0.84	7.9	8.4	91.7	1.42	8.1	9.0	91.5	1.32
Poor	6.2	6.5	89.3	1.04	6.4	6.9	89.4	1.35	6.7	7.4	85.9	1.41
Not known	3.9	0.0	93.2	3.50	4.0	0.0	97.8	2.62	6.0	0.0	97.5	3.28
Missing	1.3	0.0	90.0	2.71	2.1	0.0	97.7	2.97	4.4	0.0	100.6	3.83
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
V. Good-Good	5.5	1.39	**1.6**	**9.4**	7.5	1.50	**3.3**	**11.7**	5.5	1.15	**2.3**	**8.7**
Average-Good	-3.2	1.42	-7.2	0.8	-3.3	1.64	**-7.9**	**1.3**	-5.7	1.18	**-9.0**	**-2.4**
Below-Good	-8.8	1.33	**-12.5**	**-5.1**	-8.0	1.73	**-12.9**	**-3.2**	-10.6	1.53	**-14.9**	**-6.3**
Poor-Good	-11.3	1.46	**-15.4**	**-7.2**	-10.3	1.67	**-15.0**	**-5.6**	-16.2	1.61	**-20.7**	**-11.7**
Not K-Good	-7.4	3.65	-17.6	2.8	-1.9	2.80	-9.8	6.0	-4.6	3.37	-14.0	4.8
Missing-Good	-10.6	2.90	**-18.7**	**-2.5**	-2.0	3.13	-10.8	6.8	-1.5	3.91	-12.5	9.5

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table A.4: Teacher rating of pupils parents/guardians' support and encouragement for this child, by grade level

	1st				3rd				6th			
	%T	%A	Mean	SE	%T	%A	Mean	SE	%T	%A	Mean	SE
Very good	40.6	42.7	105.5	0.89	38.1	41.0	106.8	1.00	32.4	36.1	107.3	0.87
Good	27.4	28.9	100.2	0.85	25.2	27.1	98.3	1.18	27.6	30.8	100.8	0.69
Average	16.6	17.5	95.4	1.04	18.4	19.8	95.4	1.48	18.1	20.1	95.1	0.95
Below average	5.4	5.7	91.2	1.15	5.5	5.9	92.2	1.71	6.4	7.2	89.5	1.23
Poor	5.1	5.3	89.0	1.15	5.8	6.2	89.0	1.29	5.2	5.8	87.2	1.49
Not known	3.6	0.0	90.2	1.50	5.0	0.0	96.5	2.20	5.9	0.0	93.7	3.43
Missing	1.3	0.0	90.0	2.66	1.9	0.0	97.9	3.23	4.3	0.0	100.3	4.00
Comparisons	Diff	SED	95% BCI		Diff	SED	95% BCI		Diff	SED	95% BCI	
V. Good-Good	5.3	1.23	1.9	8.7	8.5	1.55	4.2	12.8	6.5	1.11	3.4	9.6
Average-Good	-4.8	1.34	-8.6	-1.0	-2.9	1.89	-8.2	2.4	-5.7	1.17	-9.0	-2.4
Below-Good	-9.0	1.43	-13.0	-5.0	-6.1	2.08	-11.9	-0.3	-11.3	1.41	-15.3	-7.3
Poor-Good	-11.2	1.43	-15.2	-7.2	-9.3	1.75	-14.2	-4.4	-13.6	1.64	-18.2	-9.0
Not K-Good	-10.0	1.72	-14.8	-5.2	-1.8	2.50	-8.8	5.2	-7.1	3.50	-16.9	2.7
Missing-Good	-10.2	2.79	-18.0	-2.4	-0.4	3.44	-10.0	9.2	-0.5	4.06	-11.9	10.9

Significant differences in bold. For assistance in interpreting Table, see Inset 3.1 on page 33.

Table B.1: Percentages (SE) of pupils' teachers expressing various levels of agreement with positively keyed items relating to school 'climate'

	Strongly agree	Agree	Unsure	Disagree	Strongly disagree
	Time at staff meetings is used effectively				
1st (N=2101)	17.0 (3.63)	56.3 (4.63)	13.8 (4.00)	10.3 (3.08)	2.6 (1.51)
3rd (N=1863)	36.0 (5.96)	35.9 (6.55)	12.7 (3.78)	11.8 (4.40)	3.6 (2.33)
6th (N=1923)	26.9 (4.99)	36.5 (5.56)	15.0 (4.03)	14.9 (4.38)	6.6 (3.03)
	Teaching staff are sufficiently involved in decision-making				
1st (N=2086)	21.3 (4.58)	59.2 (4.56)	12.4 (3.37)	6.6 (2.63)	0.4 (0.44)
3rd (N=1863)	35.4 (5.37)	42.0 (5.88)	11.0 (3.43)	10.6 (3.56)	0.9 (0.93)
6th (N=1959)	42.0 (5.10)	38.2 (4.77)	13.6 (3.57)	5.2 (2.39)	0.9 (0.92)
	There is a strong 'sense of community' among the staff				
1st (N=2101)	27.1 (4.72)	56.4 (5.01)	10.8 (2.88)	5.1 (2.39)	0.7 (0.69)
3rd (N=1847)	41.9 (5.86)	37.3 (5.31)	15.6 (4.19)	2.3 (0.83)	3.0 (1.73)
6th (N=1916)	41.6 (5.69)	36.7 (5.91)	11.5 (3.80)	8.7 (3.40)	1.5 (1.06)
	My school has a clear set of goals and priorities for discipline				
1st (N=2077)	22.4 (4.62)	55.3 (3.82)	7.4 (1.98)	14.3 (3.91)	0.6 (0.58)
3rd (N=1863)	44.5 (6.46)	37.9 (4.98)	8.3 (3.19)	7.4 (2.75)	1.9 (1.36)
6th (N=1959)	37.8 (5.21)	37.9 (4.96)	8.0 (3.20)	11.7 (3.12)	4.6 (2.34)
	My school has a clear set of goals and priorities for staff development				
1st (N=2101)	3.9 (1.61)	40.0 (4.41)	40.3 (4.48)	15.2 (3.17)	0.7 (0.69)
3rd (N=1863)	10.6 (3.16)	40.7 (5.54)	28.5 (4.70)	17.5 (4.69)	2.7 (1.58)
6th (N=1943)	13.5 (4.17)	27.8 (4.33)	31.2 (4.17)	21.2 (4.03)	6.3 (2.48)
	Teachers who work on their professional development are respected				
1st (N=2101)	22.0 (4.97)	57.3 (5.07)	18.1 (4.17)	0.9 (0.86)	1.7 (1.25)
3rd (N=1863)	27.6 (5.32)	50.8 (5.69)	14.1 (4.069)	7.5 (3.25)	0.0
6th (N=1927)	30.6 (4.88)	45.5 (5.30)	15.7 (4.38)	6.8 (3.00)	1.4 (1.41)
	My school has a clear set of goals and priorities for teaching reading				
1st (N=2101)	13.1 (3.73)	55.7 (5.19)	20.0 (4.01)	10.6 (3.03)	0.7 (0.69)
3rd (N=1845)	12.2 (3.55)	46.6 (5.79)	27.1 (4.22)	13.3 (4.19)	0.9 (0.94)
6th (N=1959)	10.1 (3.44)	61.3 (5.07)	13.8 (3.18)	14.1 (3.44)	0.7 (0.68)

Table B.2: Percentages (SE) of pupils' teachers expressing various levels of agreement with negatively keyed items relating to school 'climate'

	Strongly agree	Agree	Unsure	Disagree	Strongly disagree
	School resources are not used effectively				
1st (N=2077)	0.0	22.9 (4.17)	18.9 (4.32)	50.4 (6.15)	7.8 (2.50)
3rd (N=1844)	3.6 (2.30)	15.7 (4.45)	14.8 (4.07)	51.1 (6.95)	14.8 (4.55)
6th (N=1959)	1.6 (1.62)	24.2 (4.67)	21.6 (5.18)	44.3 (5.37)	8.3 (3.11)
	I would not feel able to ask for advice if I had a problem with my work				
1st (N=2101)	2.1 (1.51)	1.1 (1.04)	6.1 (2.66)	49.1 (5.63)	41.8 (5.60)
3rd (N=1863)	6.5 (2.95)	1.3 (0.90)	4.7 (2.41)	43.3 (5.17)	44.2 (5.11)
6th (N=1943)	0.7 (0.68)	1.6 (1.64)	5.5 (2.86)	38.2 (4.63)	54.0 (4.94)
	The morale of teachers in the school is low				
1st (N=2101)	0.7 (0.74)	6.0 (2.40)	11.3 (2.60)	51.8 (4.27)	30.1 (4.95)
3rd (N=1863)	0.5 (0.55)	8.9 (3.55)	12.3 (3.72)	38.3 (5.60)	39.9 (6.08)
6th (N=1943)	1.5 (0.18)	9.3 (3.60)	13.8 (4.23)	38.2 (5.77)	37.2 (5.40)
	The school's disciplinary policy is not applied consistently				
1st (N=2101)	4.2 (1.95)	20.7 (4.30)	13.0 (3.91)	48.0 (4.67)	14.1 (3.38)
3rd (N=1863)	8.6 (3.72)	10.0 (3.12)	13.8 (3.40)	46.8 (4.94)	20.8 (4.81)
6th (N=1959)	8.7 (3.17)	19.1 (3.92)	13.2 (3.97)	37.9 (4.74)	21.1 (4.59)
	There is a negative attitude toward new ideas in this school				
1st (N=2101)	1.7 (1.25)	1.5 (1.48)	16.7 (4.07)	47.0 (4.59)	33.1 (5.69)
3rd (N=1843)	1.0 (0.99)	2.8 (2.85)	10.1 (2.85)	51.5 (5.25)	34.6 (4.99)
6th (N=1959)	1.6 (1.62)	3.5 (2.01)	11.5 (3.30)	48.3 (5.76)	35.1 (5.94)