Growing Up in Ireland

National Longitudinal Study of Children

OFF TO A GOOD START?

Primary School Experiences and the Transition to Second-Level Education

CHILD COHORT
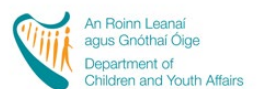
REPORT 5

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OFF TO A GOOD START?

Primary School Experiences and the Transition to Second-Level Education

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EXECUTIVE SUMMARY

The transition to second-level education has been identified as a major landmark in young people's lives, with moving to a new school involving exposure to new teachers and ways of learning, as well as a new peer group. This report draws on *Growing Up in Ireland* data collected at 13 years of age to explore the factors shaping young people's experiences of the transition period. It adopts a multidimensional approach, examining the extent of transition difficulties (as reported by parents) and changes in academic self-image – that is, confidence as a learner, from the point of view of young people themselves. Teenagers' engagement in school is examined in terms of their attitudes to school and to school subjects as well as their attendance levels. Specifically, the report addresses three main research questions:

1. To what extent are young people's social relationships – with their parents, peers and teachers – associated with their adjustment to second-level education?

2. Is young people's engagement with school at age 13 related to their earlier experiences at primary level?

3. To what extent are the ease of transition and consequent engagement with school associated with experiences of second-level education?

EXPERIENCES OF THE TRANSITION PROCESS

Parents reported few transition difficulties among their children; the vast majority were seen as having settled well into the new school and having coped well with their schoolwork. However, at least a fifth of young people were reported to be anxious about making new friends and were missing their friends from primary school. The picture was somewhat more nuanced when young people's own perspectives were considered; 13-year-olds, on average, were less confident in their academic abilities when faced with the new demands of the junior cycle than they had been when in primary school.

Significant gender and family background differences are found in transition experiences. Girls were more likely to experience transition difficulties, and became less self-confident as learners than their male peers. Young people from families who were not employed or had lower levels of education had a more difficult transition than their more advantaged counterparts. Thirteen-year-olds from immigrant families experienced somewhat greater transition difficulties, but had relatively stable levels of self-confidence over the transition period. Young people with special educational needs experienced the greatest transition difficulties and the largest decline in academic self-image between the ages of 9 and 13.

Social relationships were found to play a protective role over the transition period; more positive experiences were found among those who have larger friendship networks. Parents being formally involved in the school (through attending parent-teacher meetings or school events) was associated with fewer problems, but day-to-day communication between parents and children played a much stronger role in reducing the prevalence of difficulties. The quality of interaction with second-level teachers played a crucial role; those who had received frequent praise or positive feedback from their teachers settled in better, while those who had been reprimanded more often reported a greater decline in their academic self-confidence.

SCHOOL ENGAGEMENT

Thirteen-year-olds were broadly positive about school, though significant gender differences were evident in the proportion liking school 'very much' (35% of girls and 23% of boys). More negative attitudes to school and poorer school attendance were found among those from families with lower levels of education and from lone-parent families. Young people with special educational needs had more negative attitudes to school than their peers (54% liked school 'very much' or 'quite a bit' compared with 63% of other 13 year olds).

Primary-school experiences were found to influence later engagement with school in two ways. First, they set the tone for later experiences; young people who were already negative about school, their teachers and school subjects at the age of nine were more likely to be negative about their experiences in second-level education. Secondly, primary school provided young people with the foundational skills of literacy and numeracy, which facilitate engagement with the second-level curriculum. Those with low reading test scores at age nine were more negative about school at the age of 13. Having low Maths test scores and more negative attitudes to Maths at the age of nine were found to be particularly important in later engagement with the subject.

Second-level school experiences also significantly influenced attitudes to school and school subjects. Relationships with teachers played a crucial role. More negative attitudes to school and school subjects were found among those who received more reprimands and less positive feedback from their second-level teachers. Finding second-level subjects, especially Maths and Irish, not interesting and difficult also seemed to fuel a negative attitude to school. Furthermore, students in second year as opposed to first year were more likely to be disengaged from school and had poorer attendance. The social mix, gender mix and language medium of the school made less difference than the quality of school experiences. However, greater transition difficulties and more negative attitudes to school were found among young people who had moved from an Urban Band 1 DEIS primary school to a DEIS second-level school.

IMPLICATIONS FOR POLICY

The study findings indicate the importance of providing an engaging primary-school experience for all as a basis for later engagement. Early experience of Maths emerges as particularly important, and the findings point to the potential value in rethinking approaches to Maths teaching at primary level in order to enhance interest and skills. The importance of the foundational skills of literacy and numeracy in the transition process and engagement with second-level subjects reinforces the case for the current policy emphasis on the acquisition of these skills through the national literacy and numeracy strategy.

There is evidence of social inequality in young people's experiences and outcomes. The study adds to earlier evidence on the skills gap in literacy and numeracy between DEIS and non-DEIS schools as well as on differences in attitudes to school and transition experiences, suggesting the need to examine whether the scale of current funding is sufficient to bridge the gap. It is also worth noting that the majority of students from disadvantaged backgrounds do not attend DEIS schools, which highlights the importance of providing some assistance for disadvantaged groups across all schools.

The findings point to challenges in ensuring the inclusion of young people with special educational needs in mainstream second-level schools, with significant differences from their peers in attitudes to school, academic self-image and engagement with school subjects.

The dip in student engagement found in second year reinforces the case for junior-cycle reform and for the use of a broader repertoire of teaching and assessment methods to engage young people. The findings highlight the importance of underpinning such reform with an emphasis on bringing about a more positive school climate, moving away from the use of more negative sanctions, which appear to further alienate young people.

Chapter 1

INTRODUCTION
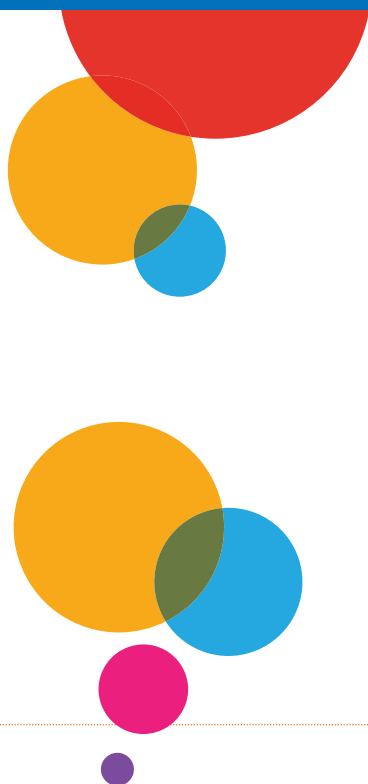
1.1 CONTEXT FOR THE STUDY

The transition from primary to secondary education has been identified as a key turning-point in young people's school careers, with students facing new approaches to learning, different relationships with their teachers, and new peer groups (see, for example, Hargreaves and Galton, 2002; Rudduck, 1996; Lucey and Reay, 2000). International research has found that the quality of the transition experience has significant implications for later educational outcomes, with positive experiences resulting in increasing engagement and higher achievement while negative experiences can lead to a cycle of disengagement and underperformance (Whitby et al., 2006; Topping, 2011). Transition difficulties have been attributed to a mismatch between young people's development stage (puberty) and the rigid school structures with which they are faced, at least in certain educational systems (Eccles et al., 1993). This highlights important policy issues about the appropriate curriculum and support structures to address this mismatch. The importance of this period of young people's lives makes it all the more imperative to have robust evidence on how they adjust to second-level education and how this is potentially influenced by the nature of the Irish educational system.

This report draws on data from the two waves of the **Growing Up in Ireland** (GUI) Child Cohort to explore the experiences of young people as they made the transition to second-level education. The report addresses three main research questions:

1. To what extent are young people's social relationships – with their parents, peers and teachers – associated with their adjustment to second-level education?

2. Is young people's engagement with school at age 13 related to their earlier experiences at primary level?

3. To what extent are the ease of transition and consequent engagement with school associated with experiences of second-level education?

Before addressing these questions in Chapters Two to Four, section two of this chapter places the current report in the context of previous research on transitions, while section three outlines the data and methodology adopted.

1.2 RESEARCH ON SCHOOL TRANSITIONS

The transition from primary to secondary education has been the focus of a good deal of research internationally. Studies have focused on students' social adjustment to their new school as well as on changes in their learning environment (see, for example, Hargreaves and Galton, 2002; Eccles et al., 1993; Gutman and Midgley, 2000). Anticipating the move to secondary school has been found to provoke both excitement and anxiety among young people (O'Brien, 2004). By the time they reach the end of primary education, many children feel they have 'outgrown' their primary school, valuing the greater independence and more diverse academic experiences that secondary school will offer (Mellor and Delamont, 2011). But, at the same time, they have anxieties about being in a larger school and taking new subjects, and are nervous of being bullied by older students (Hargreaves and Galton, 2002; O'Brien, 2004).

1.2.1 THE PREVALENCE OF TRANSITION DIFFICULTIES

In spite of anxieties about making the transition to secondary school, research has found that only a minority of students experience serious difficulties once they have moved to the new school (O'Brien, 2004; Hargreaves and Galton, 2002; Smyth et al., 2004). However, all students are required to accommodate to the new setting. The relationship with their teachers changes as they move from having one classroom teacher to having many subject teachers, and teachers are less likely to know students personally within secondary schools (Lord et al., 1994). As a result, research has shown a decline in social support over the transition period (Martinez et al., 2011) and a deterioration in relations between teachers and students (Eccles et al., 1993).

1.2.2 CURRICULUM DISCONTINUITY

The transition also involves taking new subjects and, very often, different approaches to teaching and learning than at primary-school level. A large body of work in Ireland and elsewhere (see, for example, Hargreaves and Galton, 1992; Smyth et al., 2004) points to the discontinuity between the primary and secondary curriculum. In subjects such as Maths, students are often faced with new terminology and a new way of carrying out procedures (Galton et al., 2000). Some students report a repetition of sixth-class material in first year, while others highlight an increase in the standards expected of them (Harland et al., 2002; Smyth et al., 2004).

1.2.3 WHICH GROUPS EXPERIENCE DIFFICULTIES?

While the transition to secondary education offers challenges for all students, some groups of young people have been found to experience greater difficulties than others. Girls are found to express more anxiety than boys about transferring to the new school and are more likely to miss their primary-school friends and teachers after the transition (Hargreaves and Galton, 2002; O'Brien, 2001; Smyth et al., 2004). A review of studies by Topping (2011) found that transition difficulties are greater for those from poor households or ethnic-minority backgrounds, though some difficulties are evident for all students. In the Irish context, O'Brien (2004) reports that students in schools serving a more disadvantaged population appear more reluctant to transfer to second-level school and are worried about more difficult schoolwork in the new school. However, other Irish research points to little social differentiation in the self-reported time taken to settle into second-level education (Smyth et al., 2004).

1.2.4 THE IMPACT OF SOCIAL RELATIONSHIPS

The ease of transition has been found to reflect individual self-confidence and family context. Young people who have greater self-confidence, including a more positive self-image, tend to experience fewer difficulties over the transition period (Lord et al., 1994). Parental support has been found to be a crucial factor in facilitating young people's successful integration into secondary education, reflecting both the quality of the parent-child relationship and parental involvement in supporting children's formal and informal learning (Anderson et al., 2000; Lord et al., 1994). The establishment of new friendship groups similarly eases the transition process for young people (Demetriou et al., 2000) but many continue to miss their old friends even at the end of first year (Smyth et al., 2004).

1.2.5 THE INFLUENCE OF SCHOOL CONTEXT

In many countries, there has been a growth in the use of structured programmes in schools to facilitate the transition (Hargreaves and Galton, 2002). Such measures include visits to the secondary school while in sixth class of primary school, structured induction programmes and mentoring by older students (Smyth et al., 2004). While such programmes may reduce student anxiety about making the transition (Berliner, 1993; Reyes et al., 1994), the informal climate of the school, that is, the quality of day-to-day interaction between teachers and students, has been found to be more important than the presence of formal programmes (Smyth et al., 2004).

Young people's attitudes to school are found to change over the course of the transition process. Student self-esteem, their view of their own abilities (academic self-concept) and perceived popularity may decline during the transition process as they are faced with a more academically competitive environment (Wigfield et al., 1991). By the end of first year, students are found to enjoy school less and to be less motivated about their school-work than previously (Galton et al., 2000; Harland et al., 2002).

1.2.6 THE ROLE OF SCHOOLING STRUCTURES

The transition from primary to secondary education has been the subject of a large body of research. However, fewer studies have focused on young people's transitions within lower secondary education. Whitby et al. (2006) indicate that in many countries young people experience a 'dip' in motivation and achievement over the transition period, and also later on in secondary education, with the exact timing depending on the structure of the educational system. In the Irish context, research indicates that the second year of lower secondary education is a crucial period for student engagement, with some students drifting or disengaging at this stage and failing to recover ground subsequently (Smyth et al., 2007).

In sum, a number of research studies in Ireland and internationally have looked at young people's experiences of the transition process, but few have been able to look at the influence of school factors while also taking account of home and peer-group influences. The following section outlines the potential of the *Growing Up in Ireland* study for providing new insights into the transition process.

1.3 DATA AND METHODOLOGY

The report draws on Waves 1 and 2 of the Child Cohort component of the *Growing Up in Ireland* survey, the first national longitudinal study of children in Ireland. The Child Cohort sample was generated through the primary-school system in 2007 and early 2008, when the children involved were nine years of age. A nationally representative sample of 1,105 schools was selected from the total of 3,326 primary schools in Ireland at that time. Just over 82 per cent of these (910 schools) were successfully recruited into the survey. The sample of children and their families was randomly generated

from within those schools. The response rate at the family level was 57 per cent, yielding information on a total of 8,568 Study Children, their Primary and Secondary Caregivers, their school principals and teachers.

The target sample for the second wave (when the young people were 13 years old) included all young people who had participated in the first round of interviewing and who were still resident in Ireland four years later, in 2011/2012. A total of 7,423 of these young people and their families participated in Wave 2, representing a response rate of 87.7 per cent, or 90 per cent if only those with valid addresses are included. To account for differential response or attrition at Wave 2, the data were reweighted to ensure that they were representative of the population of young people who were resident in Ireland at nine years of age and who were still living in Ireland at 13 years (see Williams et al., forthcoming).

In the Irish context, young people typically make the transition to second-level[1] education at around 11-12 years of age. Lower secondary education is comprised of a three-year 'junior cycle', with students taking the nationally standardised Junior Certificate exam at the end of this phase. Young people may then take an optional Transition Year programme, followed by a two-year senior cycle (upper secondary) programme, culminating in the high-stakes Leaving Certificate examination. By 13 years of age, almost all of the **Growing Up in Ireland** study cohort had made the transition to second-level education; 46 per cent of the sample were in first year at the time of the survey while 51 per cent were in second year. Since the focus of the current report is on how young people settle into second-level education and engage with school, and how this process is influenced by primary experiences, analyses in this report were restricted to those young people who had already made the transition to second-level education at the time of the survey. This excluded only 3 per cent of the sample, who were in sixth class of primary school or attending a special school (which is counted as primary level in the Irish context).

1.3.1 ANALYTICAL FRAMEWORK

This study focuses on two main sets of outcomes:

1. Transition difficulty, which has emerged as a central concern of research studies and is here examined both as an outcome in its own right and as a potential predictor of other aspects of school engagement.

2. School engagement, which research indicates is a key driver of educational attainment and even post-school pathways. In keeping with the multi-faceted nature of this construct (see Fredericks et al., 2004), a number of dimensions of school engagement were addressed in the study in order to provide a more comprehensive perspective on young people's educational experiences. These include attitude to school (that is, the extent to which the young person reported liking school), frequency of absence from school, engagement with school subjects (that is, the extent to which they found specific subjects easy and/or interesting), and academic self-image. The measurement of these outcome variables is discussed in greater detail in section 1.3.2 below.

The main focus of the study is on the way in which experiences of primary education are associated with experiences of the transition to and engagement with second-level education, as a basis for informing policy development at both levels. The study does not seek to take account of all the potential influences on young people's educational outcomes. Nonetheless, in seeking to isolate the effects of earlier educational experiences on later engagement, the analyses presented in this report control for a range of background and other factors.

Previous research studies on the transition to secondary education and on school engagement have pointed to significant differentiation in terms of gender and social background (see section 1.2). All of the analyses presented in this study take account of gender and a rich set of social background variables in order to explore whether such differentiation is evident in the Irish context and the extent to which it is related to earlier school experiences and social relationships. **Growing Up in Ireland** data offer the potential to control for a broader range of individual characteristics than is typically the case in educational research; the analyses therefore take account of prior physical and emotional wellbeing as well as objective social background indicators.

Because of the focus of the study on the role of social relationships in shaping the transition to second-level education (Research Question 1), analyses take account of parental formal and informal involvement in their children's education, as well as the quality of relationship with parents as perceived by children. The number of close friends and the perceived quality of friendships are examined in order to provide new insights into the role of peers in easing the transition process. The quality of relationships with teachers is examined both as an aspect of broader social relationships and as a dimension of prior school experiences.

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[1]   *The term 'second-level' is used to avoid confusion with voluntary secondary schools, which form one of the school sectors.*

It is hypothesised that primary-school experiences influence the later transition to and engagement with second-level education. Three aspects of such primary experiences are explored in the report: the extent to which the child liked school at age nine, the degree to which they liked their teacher, and the extent to which they liked their school subjects. In addition, prior school achievement in reading and Mathematics at age nine, as measured by standardised Drumcondra test scores, is used in the models, as literacy and numeracy skills are expected to provide an important foundation for engaging with the second-level curriculum and settling into the new school setting. The potential influence of the quality of relationships with second-level teachers is also explored. These independent variables are further detailed in section 1.3.3 below.

1.3.2 MEASUREMENT OF OUTCOME VARIABLES

The measure of transition difficulties was based on the response of the Primary Caregiver (that is, the person self-described as providing the most care for the young person, usually the mother) to a series of statements:

- My child settled/is settling well into secondary school.

- My child missed/misses old friends from secondary school.

- My child was/is anxious about making new friends.

- My child coped/is coping well with the school work.

- My child made/has made new friends.

- My child is involved in extra-curricular activities.

- My child gets too much homework at this school.

The wording of the question was influenced by the findings of research on transitions in combining measures of general settling in, academic adjustment and peer integration. Taken together, the items formed an overall scale with a reliability of 0.59. The reliability level is not as high as might be desired[2] since the size of the coefficient appears to reflect, at least in part, the distribution of the responses towards the 'positive' end of the scale (with a mean of 13.7 out of a maximum of 35; see Appendix Table A1.1 and the discussion in Chapter 2). Taken as the sole measure of transition experiences, the indicator could therefore be problematic. However, the measure does capture important transition issues identified in international and national research. Furthermore, analyses presented in the report rely on a number of indicators of early second-level experiences, including attitudes to school, academic self-image and school attendance, thus providing a multidimensional perspective on the transition period.

A number of measures of school engagement at the age of 13 were used. These included the extent to which the young person reported that they liked school, whether they found English, Maths and Irish interesting, whether they found English, Maths and Irish difficult, and their academic self-image (the latter measured using the Intellectual and School Status subscale of the Pier-Harris Children's Self-Concept Scale). In addition, the Primary Caregiver's report of the number of days the young person was absent from school in the previous year was used as a further measure of school engagement. While absence from school can be driven by other factors (notably illness), research has indicated that prolonged absence can reflect broader educational disengagement, especially among adolescents, where truancy may emerge as a factor (see Reid, 2013). The distribution of responses to the outcome variables is presented in Chapters 2 and 3.

1.3.3 MEASUREMENT OF INDEPENDENT VARIABLES

The analyses focus on the impact of primary and second-level experiences on transition difficulties and school engagement, controlling for a rich set of background factors. These include gender, social class, mother's education, household structure, and migrant status. Social class was measured using the classification used for the Irish Census of Population. In two-parent families, where both partners were in paid employment, a dominance approach was used (see Erikson, 1984) whereby the family's social-class group was assigned on the basis of the higher of the two occupations. A fourfold classification of family social class is used throughout this report: professional/managerial (46%), non-manual/skilled manual (33%), semi-skilled/unskilled manual (12%), and economically inactive ('never worked') (10%). The latter group refers to families where neither the mother nor father has held a job from which social class can be classified; these households tend to be a highly disadvantaged group. Throughout the report, a fourfold classification of the educational attainment of the Primary Caregiver is used, based on the classification used in the Irish Census of

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[2]   *The usual threshold is 0.7 or higher; however, the size of the coefficient reflects not just the internal consistency of the scale but the number of items and the distribution of responses.*

Population. The groups are: lower secondary (Junior Certificate or equivalent) or less (20%), Leaving Certificate (upper secondary) (39%), post-secondary (19%), and primary/post-graduate degree (22%). A twofold classification of family structure is used, distinguishing between one-parent and two-parent families; 18 per cent of the young people lived in one-parent families. A family was defined as being an immigrant family if either parent had been born outside Ireland; migrant families comprised 22 per cent of the group.

As well as family background, analyses take account of aspects of the young person's physical and psychological wellbeing that are likely to impinge on their school experiences[3]. A measure of physical illness was based on the Primary Caregiver's report that the child had an ongoing chronic physical illness or disability, which occurred in 11 per cent of cases. Having a special educational need (SEN) was assessed on the basis of the Primary Caregiver reporting whether the young person had one or more of a range of conditions or disabilities at the age of nine; the group made up 18 per cent of the sample. Previous research has indicated important differences within this group depending on type of SEN (Banks and McCoy, 2011; Cosgrove et al., 2014). However, a systematic investigation of inter-group differences goes beyond the parameters of the current study. Two subscales from the Strengths and Difficulties Questionnaire (completed by the Primary Caregiver) were also used, concerning conduct and peer relations. These subscales were selected as they reflect behaviour, that is particularly relevant to the school setting. Problems with conduct are likely to result in school-based misbehaviour and thus contribute to a negative pattern of interaction with teachers. Similarly, young people who had poor relations with peers when they were younger are likely to find it more difficult to settle into the new school setting.

Involvement, formal and informal, of parents in their child's education is hypothesised to ease difficulties in making the transition to second-level education (see Desforges, 2003). Such involvement was measured in terms of attendance at parent-teacher meetings when their child was nine[4] and 13, attendance at another school event (e.g. concert, sports day) (measured at 13 only), and the frequency of parents helping with homework (at nine and 13). Because the quality of the relationship with parents is likely to provide an important support for young people over the transition process, relationship quality is measured in terms of the nine-year-old child's perceptions of mother's demandingness and responsiveness, measured using the subscales from the Parenting Style Inventory-II[5]. In addition, the extent to which the Primary Caregiver reports talking regularly with their child (at age 13) is included to capture level of interaction within the family. Peer relations are assessed in terms of the number of close friends at age nine and 13; the quality of peer relationships is only measured at 13, using the Inventory of Parent and Peer Attachment (IPPA) trust and alienation subscales.

A number of different aspects of primary-school experiences are assessed in the analyses. Given the hypothesis that engagement with school at the age of 13 will be influenced by earlier engagement, the extent to which children liked school and their teacher at the age of nine is analysed. Attitudes to school subjects developed at an early age are also likely to influence later engagement with these subjects. Here, attitudes to reading and Mathematics are used as measures of subject engagement at age nine. A measure of attitudes to Irish at age nine was also available but is not used here because (a) engagement with reading and Mathematics are likely to provide an important foundation for engaging with the broader curriculum at second-level, and (b) attitudes to Irish among the **Growing Up in Ireland** study cohort are more negative than to the other two subjects, and thus, as found in previous studies (see, for example, Smyth et al., 2008), are not as closely related to school engagement in general.

Drumcondra test scores in reading and Mathematics are used as a measure of school achievement at age nine. The test scores are grouped into quintiles in order to explore potential non-linearity in their effects. No measures of cognitive ability were collected at primary level, but the curriculum-related Drumcondra test scores provide a useful measure of whether young people have acquired the foundational skills in English language literacy and numeracy that will equip them for the academic transition.

At age 13, attitudes to English, Maths, Irish and Science are examined in order to explore the way in which being interested in, or struggling with, certain subjects sets the tone for experience of school in general. The analyses control for whether the young person is in first or second year at the age of 13, given that previous research has shown

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[3]   A much wider set of factors, of course, potentially influence behaviour within and outside school; the parameters of the study and its limitations are discussed in greater detail in Chapter Five.

[4]   Because almost all (97%) of parents reported attending a parent-teacher meeting when their child was nine, the teacher report was also used in the models as this yielded more variation.

[5]   The measures for mothers are used in order to provide comparable analyses for those in one- and two-parent households. Demand-ingness and responsiveness between mothers and fathers are, in any case, highly correlated (r=0.6).

important differences in experiences as young people move through junior cycle (Smyth et al., 2007). The quality of relations with teachers in second-level education is captured by two scales based on young people's reports:

- Positive interaction (with a reliability of 0.562), based on the frequency over the previous two weeks of the following items:

  - You are told by a teacher that your work is good

  - You are encouraged to ask questions in class

  - A teacher praises you for answering a question

  - You are asked questions in class by a teacher

- Negative interaction (with a reliability of 0.675), based on the frequency over the previous two weeks of the following items:

  - You are given out to by a teacher because your work is untidy or not done on time

  - You are given out to by a teacher for misbehaving in class

These measures were designed to tap into young people's evaluation of the way in which their teachers treated them rather than into the trigger of such reactions (e.g. schoolwork being done well or misbehaviour). International research has highlighted the importance of teacher praise in enhancing school engagement, irrespective of young people's achievement levels (see, for example, Hallinan, 2008). Similarly, Irish research has shown that the quality of interaction with teachers influences a range of student outcomes, even taking account of young people's investment of time in homework and study and their prior achievement levels (Smyth, 1999; Smyth et al., 2011). While the reliability of these scales of teacher-student interaction is not as high as might be ideal, partly reflecting the small number of items in each scale, these measures have been used in previous Irish research studies and been found to be highly predictive of a range of educational and post-school outcomes (Hannan et al., 1996; Smyth et al., 2011; McCoy et al., 2014a). In fact, they have been found to have the strongest influences on examination performance and early school-leaving of any other school factors (Smyth, 1999).

The means and standard deviations of the independent variables are presented in Appendix Table A1.1. The patterns depicted in this table are discussed further in Chapters Two to Four.

1.3.4 ANALYTICAL STRATEGY

As the nine-year-old sample was selected on the basis of the school attended, each school contained several respondents, so it cannot be assumed that these respondents represent independent observations. Traditional regression techniques have involved the assumption that there is no autocorrelation within the data; that is, that students represent independent observations, rather than being clustered within schools. However, it cannot be assumed that students in the same school are completely 'independent' of each other in this way since their experiences and behaviour will be influenced by a common environment. In contrast to regression procedures, multilevel modelling techniques take into account the clustering of individuals within groups (Goldstein, 2003). Such models thus provide more precise estimates of the effects of school characteristics (see Appendix 1 for further details on multilevel modelling).

The charts presented in this report used weighted data and took account of the clustering within primary schools in calculating the confidence intervals around proportions and means. The discussion of the descriptive patterns found focus only on statistically significant differences between groups of young people, unless otherwise stated. Multilevel models were used in this report to allow for clustering by primary school in the analyses presented in Chapters Two and Three. Analyses presented in this report were based on two-level models, with individuals seen as clustered within primary schools. Previous analyses of *Growing Up in Ireland* data used three-level models (children within classes [teachers] within schools), where the focus was on identifying the effects of particular class characteristics or teaching methods on child experiences and outcomes (see, for example, McCoy et al., 2012). In the current study, the focus was on the potential cumulative effect of the primary school attended, rather than the influence of specific teachers. Information on primary-school experiences relied mainly on mother and child accounts as well as objective measures such as Drumcondra test scores. Primary-teacher reports were used only in relation to parental attendance at parent-teacher meetings (where, in larger schools, teachers may have been contrasting the situation of several Study Children in their class) and these were supplemented by parental reports of attendance.

 The models presented in this report were carried out using the MLwiN computer package developed at the Institute of Education, University of London (see Rasbash et al., 2012). The coefficients for the fixed effects can be interpreted in the same way as traditional regression coefficients. In addition, models specify variance terms for the school and individual levels, which indicate the degree of variation between schools and young people in the outcomes of interest. The models are intended to look at the relationship between independent variables (such as primary-school experiences) and outcomes across all groups of young people. For the outcomes considered, there is limited evidence in previous research for differential influences across different groups of students. However, given tentative evidence that some school factors (such as relationships with teachers) may have a greater impact on girls and on more disadvantaged students (see above), potential interactions between school experiences and gender, and school experiences and maternal education, are tested for in relation to the main outcomes under study.

Researchers point to the need for caution in the use of effect sizes for multilevel models (Elliot and Sammons, 2004). In this report, effect sizes for statistically significant coefficients in models with continuous outcomes are reported in the final column, using the methodology adopted[6] by Sammons et al. (2007); this approach indicates that effect sizes of 0.2 are moderate while those of 0.5 or more are strong. It should be noted that effects sizes in educational research are typically small to moderate (Coe, 2002). For categorical outcomes, effect sizes are reported in the form of odds ratios. The proportion of variance explained at the young person and school levels is presented as a test of model fit for models with continuous outcomes. However, no such test of fit is possible for categorical outcomes using MLwiN. Chapter Four uses a more sophisticated version of multilevel modelling – cross-classified models – to disentangle the simultaneous effects of the primary and second-level schools attended on a range of young people's outcomes. For all models, dummy variables were included to indicate missing values. This approach has the advantage of using the total sample and thus providing more precise estimates. These dummy variables are not of substantive interest so are not reported in the tables.

1.4 OUTLINE OF THE REPORT

Chapter Two looks at the nature of young people's social relationships – with parents, peers and teachers – at 13 years of age. It then looks at the extent to which these social relationships were associated with the ease of transition to second-level education. Chapter Three examines the extent to which primary-school experiences were related to later engagement with school and schoolwork. In particular, it seeks to explore whether primary-school experiences appeared to foster later engagement by enhancing children's view of schooling and/or by providing them with the foundational skills (in the form of literacy and numeracy) to fully engage with the second-level curriculum. The chapter also examines the extent to which initial experiences of second-level education, particularly the quality of relations with teachers, were related to school engagement. Chapter Four disentangles the effects of primary school and second-level school attended on transition difficulties, academic self-image, attitudes to school and aptitude test scores at the age of 13.

APPENDIX 1: MULTILEVEL MODELLING

Social systems frequently have a hierarchical organisation; for example, people (level 1) live in households (level 2) in local authority areas (level 3), and students (level 1) learn in schools (level 2). The existence of hierarchically organised data means that we need to take this hierarchy into account when analysing data (Goldstein, 2003). Traditional regression techniques have involved the assumption that there is no autocorrelation within the data; that is, that students represent independent observations, rather than being clustered within schools. From this perspective, the relationship between prior ability and exam performance, for example, among young people in a sample of second-level schools is assumed to be universal – that is, that there are no 'school effects'. However, groups rarely form at random and, once formed, the members of a group interact with each other to create even greater homogeneity (Jones, 1992). Treating students in a school as independent observations results in mis-estimated precision, incorrect standard errors, confidence limits and tests (Jones, 1991). Consequently, using regression techniques for research on schools increases the risks of finding differences and relationships where none actually exists (Goldstein, 2003; Kreft and de Leeuw, 1998).

In contrast to regression procedures, multilevel modelling techniques take the clustering of individuals within groups into account. Multilevel models fall into two broad categories: random intercepts models, and fully random models. Random intercepts models allow for a difference between the groups (for example, schools) in their outcome. Thus, the exam results (grade-point average) of student i in school j can be broken down into: the average grade across all schools; the difference between the score in school j compared to the average across all schools, and the difference for

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[6]   *For categorical predictor variables, the effect size is the coefficient divided by the square root of the individual-level variance. For a continuous variable centred on its mean, the effect size is twice the coefficient divided by the square root of the individual-level variance.*

student i between his/her grades and the average in his/her school. Fixed effects can be interpreted in the same way as regression coefficients; we can, for example, look at the influence of gender on exam grade. The model also estimates two random terms: variance at the individual (student) level and variance at the school level (or school-level residual). The proportion of variability at the school level, or 'intra-school correlation', can be taken as an indicator of the extent to which variation in a particular outcome is attributable to the school level. If the measure is very small, it can be concluded that schools have little impact on student grade-point average.

A further development is possible by allowing the relationship between prior ability and grade-point average to vary across schools – that is, a fully random model. In such a model, we estimate the average relationship between ability and grade-point average across all schools and the deviation of each school from this overall slope. Multilevel models are also possible where outcomes are discrete (binary or categorical) rather than continuous variables.

Analyses presented in this report were carried out using the MLwiN computer package developed at the Institute of Education, University of London (see Rasbash et al., 2012). Output from this package provides estimates of both fixed and random parameters. Fixed parameters can be interpreted in the same way as conventional regression coefficients. Where outcomes are continuous (as with the measure of transition difficulties, for example), higher values indicate that the factor is associated with a greater level of transition difficulties, taking account of the other factors in the model. Where outcomes are binary or categorical (as is the case for attitudes to school, for example), the coefficients are presented in terms of odds ratios; thus, an odds ratio of two for gender and 'hating/not liking school' would indicate that girls are twice as likely as boys to have very negative attitudes to school. The distinctive feature of multilevel modelling is that it provides estimates of random parameters – that is, the amount of variation between individuals and schools. This can indicate the extent to which schools differ, taking account of student characteristics. In the case of continuous outcomes, comparing the random parameters of two models allows for an estimate of the amount of variation explained (R^2) at the individual and school levels respectively. R^2 cannot be estimated for binary or categorical models using MLwiN.

Because it can be quite complex to interpret models with a large number of coefficients, multilevel model results are used to predict the values for specific groups; these are depicted in charts (see, for example, Figures 2.10 and 2.11).

The findings based in this report are largely based on two-level models, with young people (level 1) regarded as clustered within their primary schools (level 2). The choice of primary school as level 2 reflects the use of schools as a sampling frame for the first wave of the *Growing Up in Ireland* Child Cohort survey. The nature of the survey design therefore necessitates taking into account the fact that primary-school children in the same school were likely to share common characteristics by virtue of the kinds of parents who chose to send their children to that school and the educational and social environment provided by the school itself. By the age of 13, almost the entire cohort had made the transition to second-level education, but because of the nature of school selection in Ireland, there was no simple mapping between the primary and second-level schools attended. Cross-classified models were therefore used in Chapter 4 in order to assess whether both primary and second-level experiences shaped student experiences. These models are computationally more complex, so they are used to examine the degree of variation between schools in specific outcomes and the extent to which school type is associated with these outcomes rather than to estimate the more detailed models presented in Chapters 2 to 4.

Appendix Table A1.1: Frequencies, means and standard deviations of the independent variables

Categorical variables	%			
Gender:				
Male	50.70			
Female	49.30			
Social class:				
Professional/managerial	45.60			
Non-manual/skilled manual	33.30			
Semi/unskilled manual	11.60			
Economically inactive	9.50			
Mother's education:				
Lower secondary	20.20			
Upper secondary	39.00			

Categorical variables	%			
Post-secondary	19.10			
Degree or higher	21.60			
Household type:				
One parent	17.50			
Two parents	82.50			
Migrant status:				
Immigrant	21.70			
Irish	78.30			
Physical illness at 9:				
Illness	10.50			
No illness	89.50			
SEN:				
SEN	18.10			
No SEN	81.90			
Attitude to school at age 9:				
Always like	25.70			
Sometimes like	67.80			
Never like	6.40			
Attitude to teacher at age 9:				
Always like	51.90			
Sometimes like	42.20			
Never like	5.90			
Attitude to reading at age 9:				
Always like	58.50			
Sometimes like	36.70			
Never like	4.80			
Attitude to mathematics at age 9:				
Always like	46.30			
Sometimes like	43.70			
Never like	10.10			
Frequency of family help with homework at age 9:				
Always/almost always	50.90			
Regularly	20.60			
Now and again	17.80			
Rarely	8.30			
Never	2.40			
Frequency of parental help with homework at age 13:				
Always/almost always	7.50			
Regularly	15.10			
Now and again	39.00			
Rarely	24.80			
Never	13.60			
Parent attended parent-teacher meeting: parent report (age 9)	97.60			
Parent attended parent-teacher meeting: teacher report (age 9)	86.20			

Categorical variables	%			
Parent attended parent-teacher meeting (age 13): parent report	87.80			
Parent attended other school event (age 13): parent report	61.40			
Frequency of parents and their children talking (age 13):				
Every day	65.70			
3-6 days a week	23.30			
1-2 days a week or less	11.00			
Number of close friends at age 9:				
None/1	8.10			
2 or 3	41.00			
4 or 5	33.70			
6+	17.20			
Number of close friends at age 13:				
None/1	4.90			
2 or 3	32.70			
4 or 5	34.60			
6+	27.80			
Year group:				
First year	46.90			
Second year	53.10			
Continuous variables	Mean	Standard deviation	Minimum	Maximum
SDQ conduct subscale (age 9)	1.33	1.49	0	10
SDQ peer relations subscale (age 9)	1.24	1.48	0	10
Demandingness subscale for mother (age 9)	11.93	1.60	5	15
Responsiveness subscale for mother (age 9)	12.98	1.49	5	15
Trust in friends (age 13)	42.95	7.19	10	50
Alienation from friends (age 13)	13.92	4.34	5	32
Positive interaction with teachers (age 13)	2.75	0.55	1	4
Negative interaction with teachers (age 13)	1.69	0.69	1	4
Transition difficulties (age 13)	13.67	3.93	1	35
N	7,383			

Chapter 2

SOCIAL RELATIONSHIPS AND THE ADJUSTMENT TO SECOND-LEVEL EDUCATION
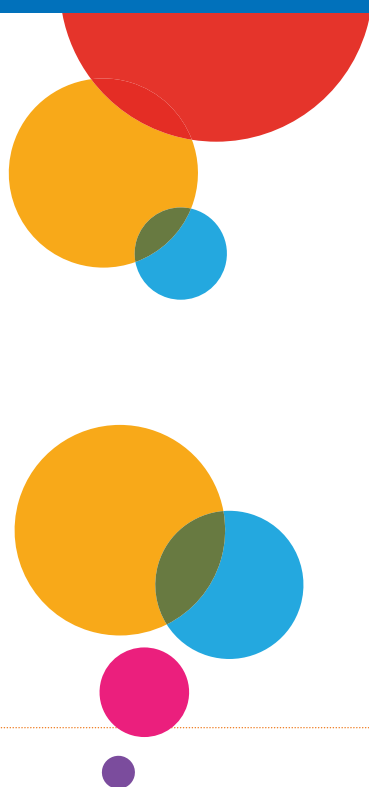
2.1 INTRODUCTION

The way in which relationships shape educational experiences has often been neglected in educational research (Lynch and Lodge, 2002). More recently, however, emerging work has begun to recognise the crucial role of teacher-student relationships in influencing young people's outcomes, both academic and non-academic (Roorda et al., 2011; Martin et al., 2009). Previous Irish research has shown the importance of positive relations between students and teachers in enhancing school retention and educational performance (Smyth, 1999; Smyth et al., 2011). However, such studies have rarely taken a holistic perspective on the different sets of emotional ties young people have and the way in which they may change over the transition to second-level education. This chapter looks at the relationships of young people with three key groups of significant others: parents, friends and teachers. The first section explores whether the involvement of parents in supporting their children's education changed as children grew older. International research has consistently pointed to the growing importance of friends as young people move into adolescence (Giordano, 2003). The second section will therefore examine the changes in peer networks between nine and 13 years of age. In the third section, the analyses will examine the nature of student relationships with teachers during early adolescence.

2.2 PARENTS

Parental involvement in their child's education can involve formal contact with the school through parent-teacher meetings, for example, and/or informal involvement through helping with homework and discussing school (see Desforges, 2003). While formal involvement is more visible, research has indicated that informal involvement has a greater influence on children's outcomes (Harris and Goodall, 2007). It has also found that the involvement of parents in their child's education tends to decrease in intensity as children grow older (Williams et al., 2002; Stevenbush and Baker, 1987; Dornbusch and Glasgow, 1996). Dornbusch and Glasgow (1996) attribute this decline not only to parents granting their children more autonomy as they move into adolescence but also to reduced opportunities for parental contact given that there are multiple teachers in secondary schools.

In the *Growing Up in Ireland* study, mothers were asked about their attendance at parent-teacher meetings when their child was nine and 13 years of age. In addition, in the second wave mothers were asked whether they had attended a school concert, play or other event. Almost all (98%) mothers reported that they had attended a parent-teacher meeting when their child was at primary school. Interestingly, teacher reports of whether parents had attended a parent-teacher meeting indicated somewhat less involvement (86% compared with 98% for parental self-report). The vast majority (88%) of mothers reported attending a parent-teacher meeting in the last year when their child was 13 years of age (Appendix Table A1.1). Fewer mothers (62%) had attended a school concert, play or other event; the available data cannot establish whether non-attendance reflects non-provision of such events by the school or parents not choosing to attend events that were provided.

Tables 2.1 and 2.2 explore the factors associated with more frequent attendance at parent-teacher meetings and other school events respectively. Because the outcomes are binary (attended v. not attended), multilevel logistic regression models were used. Coefficients are presented in the form of odds ratios that indicate the increased (or reduced) likelihood of attending associated with a specific factor compared to the base category. Previous research has indicated that the nature of parental attendance at school meetings and events tends to be socially differentiated, with less involvement among families with less cultural capital (such as education) (Lareau, 2000). Because of the high level of attendance at parent-teacher meetings in general, relatively little variation in attendance was evident by family background factors (Table 2.1). In contrast to other aspects of family background (such as social class or family structure), maternal education emerged as significantly predictive of formal school involvement. Rates of attendance were found to be 1.3–1.5 times higher among mothers with at least upper secondary (Leaving Certificate) education than with mothers in the base category – that is, those who had only lower secondary (Junior Certificate) education (or less). Although some international research points to less school involvement among immigrant parents (see, for example, Turney and Kao, 2009), no such difference was evident in the Irish context. There was no evidence that parents of children with difficulties, such as special educational needs, physical illness, and behaviour or peer difficulties, were more likely to attend parent-teacher meetings in response to these difficulties[7]. Furthermore, there was little consistent variation in attendance at parent-teacher meeting by prior reading and mathematics achievement, and thus no evidence that parents were more engaged with schooling where their children were experiencing difficulties with schoolwork.

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[7] *However, other Irish research indicates that being called in to the school to discuss their child was more common where the young person had higher levels of misbehaviour (Byrne and Smyth, 2011).*

Table 2.1: Multilevel model of the factors associated with parental attendance at a formal parent-teacher meeting, as reported when the young person was aged 13

	Odds ratio
Fixed effects:	
Constant	2.195
Female	1.003
Class:	
Professional/managerial	1.025
Non-manual/skilled manual	0.973
Economically inactive	0.785
(Ref.: Semi/unskilled manual)	
Mother's education:	
Upper secondary	1.315*
Post-secondary	1.533*
Degree or higher (Ref.: Lower secondary)	1.413*
One-parent family	0.817
Immigrant	1.016
SEN (as reported at age 9)	0.909
Ongoing physical illness/condition (as reported at age 9)	1.175
SDQ conduct problems (as reported at age 9)	0.997
SDQ peer problems (as reported at age 9)	1.049
Reading: (age 9)	
Quintile 2	1.091
Quintile 3	0.858
Quintile 4	0.893
Quintile 5	0.977
Maths: (age 9)	
Quintile 2	0.785±
Quintile 3	0.972
Quintile 4	0.931
Quintile 5	0.973
Second year	4.332***
Demandingness of mother (centred on mean) (as reported at age 9)	1.022
Responsiveness of mother (centred on mean) (as reported at age 9)	0.987
Attended parent-teacher meeting at age 9 (teacher report)	1.188
Attended meeting with teacher at age 9 (parent report)	1.578±
Primary-school level variance	0.617***
No. of schools	877
No. of students	7443

*Note: *** $p<.001$; ** $p<.01$; * $p<.05$; ± $p<.10$.*

No relationship was found between the quality of the relationship between mothers and children (as measured by their demandingness and responsiveness) and parental attendance at meetings. Even taking account of differences between schools in the profile of parents, significant variation was found in attendance at parent-teacher meetings on the basis of

the primary school attended, suggesting that school context may play a role in fostering teacher-parent communication, with patterns formed persisting into second-level education.

It is interesting to compare attendance at formal meetings with earlier attendance when the study cohort was aged nine. Parents who reported that they had had a formal meeting with the teacher, when interviewed in the first wave of the study, were somewhat more likely to report having attended a meeting when their child was aged 13. Interestingly, however, teacher report of earlier parental attendance was not associated with later attendance. Parents of young people in second year were much more likely to report attending a parent-teacher meeting in the previous 12 months, that is, since their children had started second-level education. The pattern most likely reflects second-level schools scheduling more formal meetings for parents in order to provide information on school policies and structures to new students and to help parents support their child over a potentially turbulent period of adjustment.

Table 2.2: Multilevel model of the factors associated with parental attendance at a school event, as reported when the young person was aged 13

	Odds ratio
Fixed effects:	
Constant	1.481
Female	1.073±
Class:	
Professional/managerial	1.028
Non-manual/skilled manual	1.026
Economically inactive (Ref.: Semi/unskilled manual)	0.983
Mother's education:	
Upper secondary	1.082
Post-secondary	1.167±
Degree or higher (Ref.: Lower secondary)	1.134*
One-parent family	0.945
Immigrant	0.967
SEN (as reported at age 9)	0.990
Ongoing physical illness/condition (as reported at age 9)	0.933
SDQ conduct problems (as reported at age 9)	1.001
SDQ peer problems (as reported at age 9)	0.992
Reading: (at 9)	
Quintile 2	1.154±
Quintile 3	1.085
Quintile 4	1.198*
Quintile 5	1.121±
Maths: (at 9)	
Quintile 2	1.028
Quintile 3	0.984
Quintile 4	1.026
Quintile 5	1.048
Second year	0.818***
Demandingness of mother (centred on mean) (as reported at age 9)	0.994
Responsiveness of mother (centred on mean) (as reported at age 9)	1.022
Attended parent-teacher meeting at age 9 (teacher report)	1.053
Attended meeting with teacher at age 9 (parent report)	1.053
Primary-school level variance	0.216***
No. of schools	877
No. of students	7443

*Note: *** p<.001; ** p<.01; * p<.05; ± p<.10.*

As with attendance at parent-teacher meetings, social differentiation in attendance at other school-based events was not strong (Table 2.2). Mothers with post-secondary or tertiary education were significantly more likely to attend

other school-based events (such as concerts or sports days) than those with secondary education, but the scale of this difference was modest. This pattern is consistent with previous Irish research which showed that parents who themselves had less familiarity with the educational system or perhaps even a more negative experience of school were less likely to become formally involved in their child's school (Byrne and Smyth, 2011). Parents of children in the lowest reading achievement group were somewhat less likely to attend such events than other parents, but these differences were again modest in scale. The parents of girls were slightly more likely to have attended such an event, though the gender difference was very small. The quality of parent-child relationships was not associated with attendance at school-based events nor was previous involvement in their child's schooling. The parents of second-year students were less likely to have attended such an event in the last 12 months than the parents of first-year students – an opposite pattern to that found for attendance at formal parent-teacher meetings. As indicated above, it is not possible to determine whether this reflects the provision of such opportunities by the school and/or the likelihood of parental attendance. It may be that primary schools held specific events for students moving on to second-level education and/or that second-level schools hosted events for incoming first-years. As with attendance at parent-teacher meetings, attendance at other school events varied significantly according to the primary school attended, even taking into account differences in the social composition of the school. Given the pattern found for student year group, this may reflect the extent to which primary schools differed in hosting such events.

2.2.1 PARENTAL HELP WITH HOMEWORK

Figure 2.1 shows a high level of parental involvement in help with homework when children were nine years of age, with half of parents helping 'always' or 'nearly always'. The *Growing Up in Ireland* data allow the examination of whether the frequency of helping with homework changed over the transition to second-level education. A very significant shift was evident in the frequency of parental help with homework, with only 8 per cent helping 'always' or 'nearly always' when young people were aged 13. The most prevalent pattern when young people were aged 13 was for parents to help 'now and again' (39%). Parents attributed rarely or never helping with homework when their child was 13 to the fact that their child did not need help (79%) or did not want help (15%). While the overall pattern was one of a reduction in the frequency of parental help, there was some variation at the individual level. The majority (72%) of parents decreased their level of involvement in homework over this period while 21 per cent maintained the same level of involvement as previously and a small proportion (8%) actually increased their involvement.

Figure 2.1: Frequency of 9 and 13-year-olds receiving parental help with homework
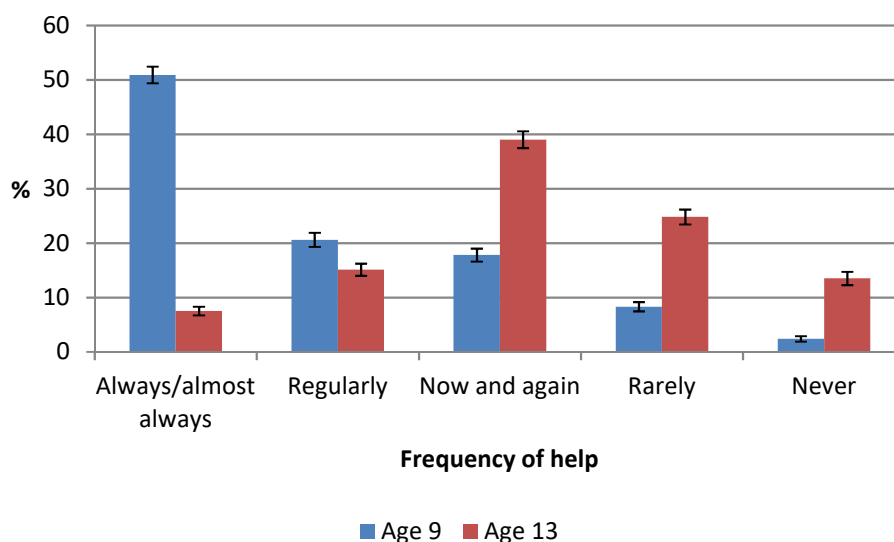
Despite the shift in frequency of help between nine and 13 years of age, the majority of parents had at least some involvement in helping with their child's homework when their child was 13 years of age: 8 per cent 'always/almost always' helped, 15 per cent 'regularly' helped, while a further 39 per cent helped their child 'now and again'. There was some social differentiation in the frequency with which parents helped with homework (see Williams et al., forthcoming), but these differences were relatively modest in scale. In just over a fifth of one-parent households and families where the parent(s) were economically inactive, young people 'never' received help with homework from their family. Never helping with homework was also more prevalent in families where the mother had lower secondary education (or less) (18% compared with 12% in the case of graduate mothers). A similar pattern was found in relation to household income, with the lowest income group more likely to never help with homework than the highest income group (18% compared

with 11%). Parents were more likely to help with homework where the young person had a special educational need; over a third (35%) did so 'always/almost always' or 'regularly' compared with a fifth of families whose child did not have a SEN.

Interestingly, high levels of formal involvement did not necessarily translate into high levels of informal involvement among parents. Figure 2.2 shows only marginally greater involvement in helping with homework among parents who had attended a parent-teacher meeting. Furthermore, those who had attended other school events were less likely to help with homework on a regular basis. These findings indicate the importance of specifying the kind of parental involvement being discussed.

Figure 2.2: Frequency of parents helping the young person with homework at age 13 by parental attendance at parent-teacher meetings and other school events
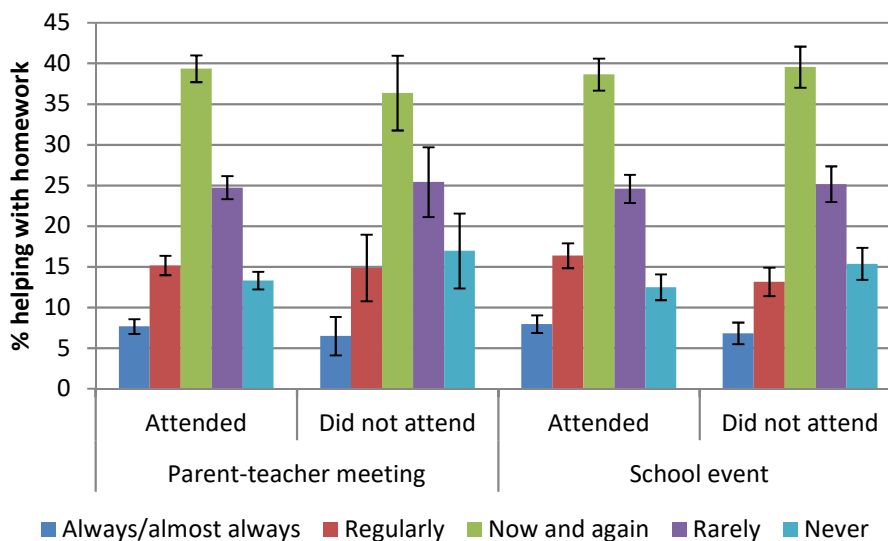
Table 2.3 shows the factors associated with changes in the frequency of homework involvement over time; less involvement could mean moving from 'always/almost always' helping at age nine to 'regularly' at age 13, while more involvement could mean shifting from 'rarely' to 'now and again'. While the numbers who increased involvement (at 8%) were relatively small, it is worth unpacking the characteristics of the group, given that their behaviour ran counter to the general trends. There was little marked social differentiation in changes in homework involvement, with no systematic variation by social class or immigrant status. However, graduate parents were less likely to decrease their involvement over time, being less than three-quarters as likely to do so as families where mothers had Junior Certificate education (or less). One-parent families were 1.7 times more likely to increase their involvement than two-parent families over the four-year period, even taking account of prior achievement levels among their children. Frequency of helping with homework was more likely to remain stable over time (that is, was less likely to increase or decrease) for young people with special educational needs than those without such needs; this most likely reflects the continued reliance of this group on additional supports outside as well as within school. In contrast to the pattern for SEN, having other difficulties in terms of physical illness, conduct or peer problems had no significant relationship with changes in homework help.

There was little significant variation in terms of prior reading achievement among children at age nine but, somewhat surprisingly, the parents of those with high levels of mathematics achievement appear to have increased their involvement somewhat by the time their child was 13, while those with low to medium levels reported less involvement. There was little association between quality of relationship with parents and changes in help with homework; families where mothers were more responsive were somewhat less likely to increase their involvement in helping with homework over time. Parents of second-year students were less likely to have increased their involvement in helping with homework than those with children in first year. Figure 2.2 shows that formal involvement was not strongly associated with informal involvement among parents. Similarly, formal involvement in the form of attending parent-teacher meetings at primary level was not significantly related to changes in helping with homework. Changes in the extent of parents helping with homework did not vary markedly by the primary school attended.

Table 2.3: Multilevel model of the factors associated with parental involvement in helping with homework, as reported when the young person was aged 13

	More involvement Odds ratio	Less involvement Odds ratio
Fixed effects:		
Constant	0.447	3.074
Female	1.175±	1.089
Class:		
Professional/managerial	0.864	0.841
Non-manual/skilled manual	0.825	0.780*
Economically inactive (Ref.: Semi/unskilled manual)	0.677	0.818
Mother's education:		
Upper secondary	0.998	0.936
Post-secondary	0.917	0.852
Degree or higher (Ref.: Lower secondary)	0.921	0.719***
One-parent family	1.675***	1.052
Immigrant	0.842	0.906
SEN (as reported at 9)	0.773*	0.829**
Ongoing physical illness/condition (as reported at 9)	1.095	1.153
SDQ conduct problems (as reported at 9)	1.009	0.967
SDQ peer problems (as reported at 9)	1.015	1.010
Reading: (at 9)		
Quintile 2	1.307	1.149
Quintile 3	1.381±	1.073
Quintile 4	1.371±	1.108
Quintile 5	1.289	1.042
Maths: (at 9)		
Quintile 2	0.975	1.183±
Quintile 3	1.194	2.241*
Quintile 4	1.214	1.100
Quintile 5	1.459*	1.151
Second year	0.737***	0.995
Demandingness of mother (centred on mean) (as reported at 9)	0.968	1.002
Responsiveness of mother (centred on mean) (as reported at 9)	0.929*	1.002
Attended parent-teacher meeting at age 9 (teacher report)	0.977	1.036
Attended meeting with teacher at age 9 (parent report)	0.710	1.235
Primary-school level variance	0.082	0.055*
No. of schools	877	
No. of students	7428	

*Note: *** p<.001; ** p<.01; * p<.05; ± p<.10.*

2.2.2 KNOWLEDGE ABOUT CHILD'S SCHOOLING

Parents can be aware of their child's schooling through information they receive from their child and/or through formal and informal communication with the school. The Wave 2 survey collected information on how much mothers felt they knew about what was going on in their child's school. The vast majority reported that they knew how their child was getting on in their different subjects (94%) and when their child was having a test at school (90%) (Figure 2.3). Four-fifths felt they knew what type of homework their child had, and a similar proportion reported that their child wanted to tell them about school. The majority of mothers across all social groups (in terms of social class, mother's education and household structure) felt that they knew how their child was getting on at school (see Williams et al., forthcoming).

The main difference emerged in relation to the young person's gender. Mothers of daughters were much more likely to report that their child 'always or almost always' wanted to tell them about school than the mothers of sons (70% compared with 51%). This pattern seemed to contribute to slightly more knowledge about their child's schooling among mothers of daughters than among mothers of sons.

Figure 2.3: Proportion of mothers who 'always/almost always' or 'often' knew what was going on in relation to different aspects of their child's education
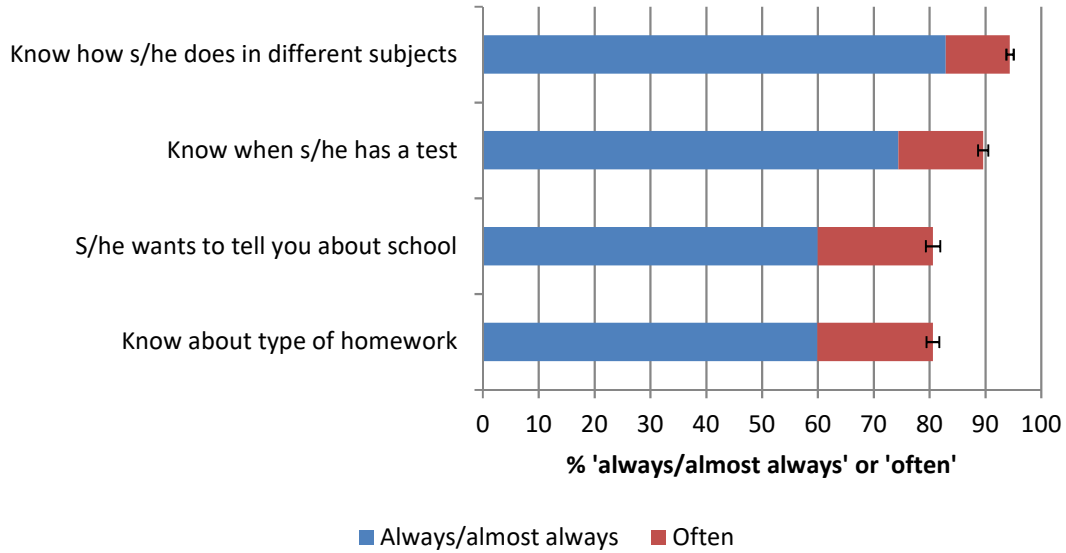
Further analyses were conducted to see which potential sources of information (such as formal school meetings, other events and the young person's talking about school) were associated with improved reported knowledge of their children's schooling. Figure 2.4 shows the strongest relationship was with the child wanting to tell the parent about school, indicating the importance of informal parent-child communication in fostering parental knowledge and awareness of the schooling process. Helping with homework also served as a way of enhancing parental knowledge of school. In contrast, the difference in level of day-to-day knowledge about school was not as strongly associated with formal involvement (attending parent-teacher meetings).

Figure 2.4: Proportion of mothers who 'always/almost always' knew when the child had test/homework by the child's frequency of wanting to tell about school, parental attendance at parent-teacher meeting and frequency of help from family with homework
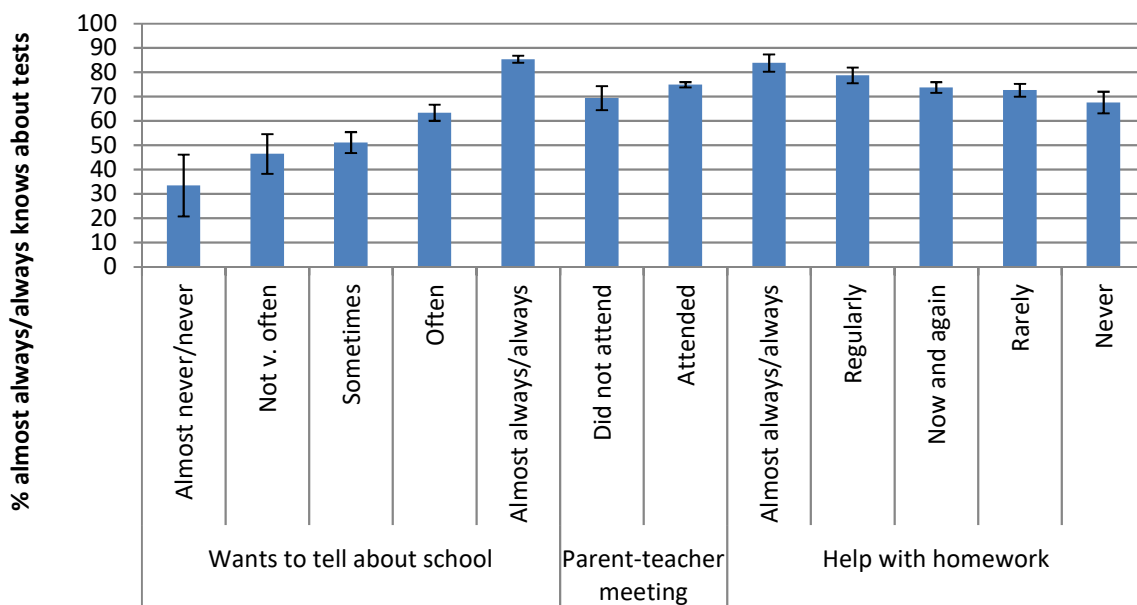
2.3 FRIENDS

Moving from primary to second-level education involves a change in peer group (see Demetriou et al., 2000). Previous research has shown that making new friends and missing old ones are sources of worry and anxiety for young people, especially among girls (O'Brien, 2003; Smyth et al., 2004). Having a familiar face in the new school has been found to ease the transition process. The nature of friendship and the importance of peer groups have been found to change as young people move into early adolescence. Early adolescence is characterised by an increased emphasis on physical appearance and social presentation (Lord et al., 1994). Confidence in one's competence in peer relationships and social skills is, therefore, particularly important for young adolescents. The importance of friendship and peer groups is found to increase in early adolescence, and investment in social networks takes up a considerable proportion of young people's free time (Crockett and Losoff, 1984).

The *Growing Up in Ireland* survey collected information on the number of close friends that young people had as well as the quality of that friendship. Comparable information is available from the Primary Caregiver on the number of close friends their child had at the ages of nine and 13. At age 13, the questionnaire for young people included items from the Inventory of Parent and Peer Attachment (IPPA), which measures the psychological security derived from relationships with significant others. Two aspects[8] of these relationships are considered in this section: the degree of mutual understanding and respect (the Trust scale) and feelings of anger and interpersonal alienation (the Alienation scale) (Armsden and Greenberg, 1987)[9]. The mean values indicate friendships characterised by relatively high trust and low alienation among the study sample (Appendix Table A1.1). This is worth noting given that the quality of peer attachments has been found to be significantly related to feelings of wellbeing among adolescents (Armsden and Greenberg, 1987).

Figure 2.5: Number of close friends among young people at 9 and 13 years of age, as reported by the Primary Caregiver
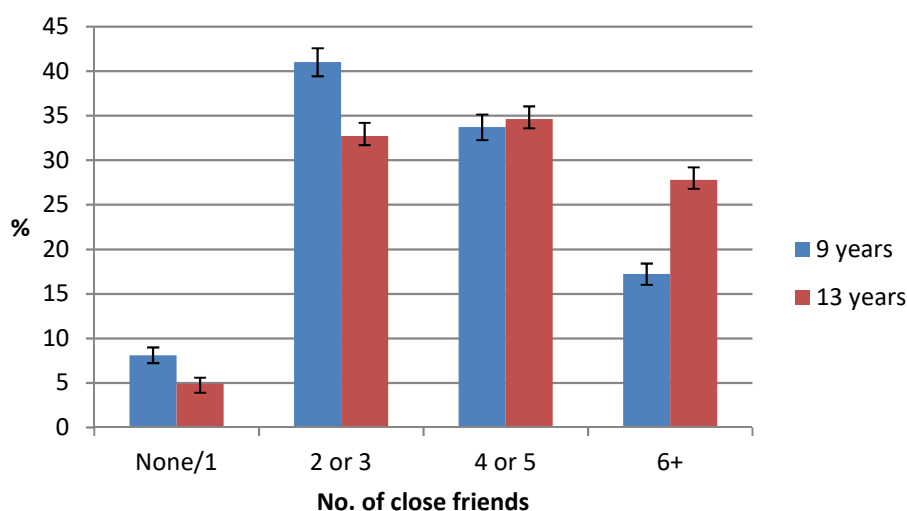
Figure 2.5 shows the number of close friends that young people had at the ages of nine and 13, as reported by their Primary Caregiver. The pattern indicates that some young people acquired more close friends as they grew older; the proportion having six or more close friends increased from 17 per cent to 28 per cent. The difference in number of friends at the two time-points was statistically significant. While the overall pattern indicated an increase in the size of the friendship network, there was a good deal of variation among individuals. Thirty-nine per cent of young people saw an increase in their number of close friends while a similar proportion had stable networks (in terms of size but not necessarily composition). However, over a fifth (22%) had fewer friends at second-level stage than they had at the age of nine. For the majority (70%) of young people, their friends were around the same age as them, though significant proportions had younger or older friends (44% and 49% respectively). In most cases (60%), parents had met 'most or all' of their child's friends.

Multilevel models were used to identify the factors associated with the size of the friendship network at the age of 13 (see Table 2.4). There was a strong stability in the number of close friends at the age of both nine and 13. Young people

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[8]   For reasons of interview length, the Communication scale was not included in the **Growing Up in Ireland** survey.

[9]   Primary Caregiver reports of the number of close friends were used for comparability between the waves at nine and 13 years of age. Young people who reported they had no friends at age 13 were not asked to complete the IPPA scale; however, they would have completed the scale if they had some friends they hung around with but no close friends.

who had six or more close friends when they were nine were 7.4 times more likely to have six or more friends at the age of 13 than those who had one or no friends. This may reflect young people maintaining the same friends over this period (though this cannot be determined from the available data) or may be because of underlying differences in temperament and interpersonal behaviour.

Girls were somewhat more likely to have four or five friends than boys, but gender differences in the number of friends were not marked otherwise. There has been a lack of research on social-class differences in the size of friendship groups (Giordano, 2003), although ethnographic research highlights the importance of larger 'gangs' of friends for working-class youth, especially boys (see, for example, Willis, 1977). Analyses of *Growing Up in Ireland* data indicated very few differences by social background (social class, maternal education and household structure). There was some tendency for working-class (semi/unskilled manual and never worked) students to have larger friendship groups (six or more friends) than their middle-class peers; thus, young people from professional/managerial backgrounds were only three-quarters as likely to have a large group of friends as those from semi/unskilled manual backgrounds. Similarly, children of more highly educated mothers were somewhat less likely to have larger groups of friends. Previous research has indicated that more academically oriented young people may be labelled as 'swots' or 'nerds' and hence have fewer friends (see, for example, Jackson, 2006). However, little significant variation was found by prior achievement in the size of friendship networks for the *Growing Up in Ireland* sample. The size of the network was similar for first- and second-year students and did not vary significantly by the individual primary school attended.

In contrast to other background factors, immigrant status and having a special educational need emerged as having a significant relationship with number of friends. Figure 2.6 indicates the scale of the difference by showing the predicted likelihood of having the specified number of close friends for migrant and SEN young people compared with Irish non-SEN youth, holding other factors in the model constant. Immigrant young people were significantly less likely to have large groups of friends (four or more) than their Irish peers. Young people with a special educational need were 1.6 times more likely to have only one friend or no friends at all, even taking into account their higher level of difficulties interacting with peers. Not surprisingly, those who were reported as having difficulties with peer interaction (as measured by the Strengths and Difficulties Questionnaire subscale) when they were nine had significantly fewer friends four years later, and this pattern holds even taking account of the number of friends at age nine. In contrast to the pattern for SEN, young people with an ongoing physical illness/condition or with conduct difficulties did not differ from their peers in the size of their friendship group.

Figure 2.6: Predicted number of close friends for young people from immigrant families and with special educational needs compared with Irish, non-SEN 13-year-olds
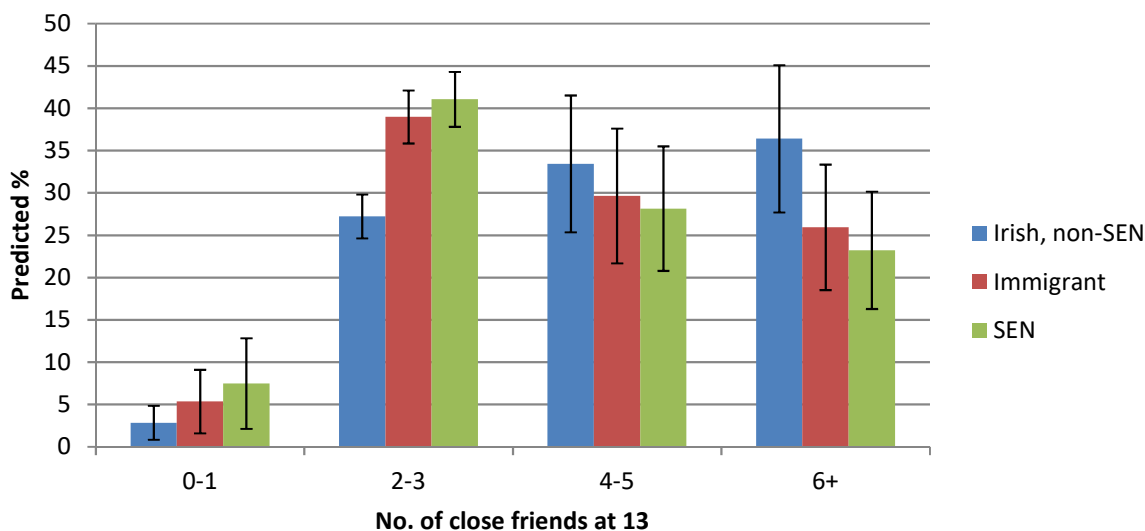
Note: This figure uses the coefficients presented in Table 2.4 derived for the base category (male, working-class, low education, two parents, first year, no physical illness), those with middle quintile reading and Maths test scores, and those with average SDQ scores.

So far, the discussion has focused on the number of friends but it is also important to consider the quality of these friendships (Crosnoe, 2011). Interestingly, there was no evidence of a zero-sum trade-off between the number and

quality of friends; in other words, those in larger groups did not have less trust in their friends. Not surprisingly, those who had no close friends reported less trust and more alienation from their peer group (see Figure 2.7).

Figure 2.7: Quality of friendships (trust and alienation) experienced by young people, by number of close friends
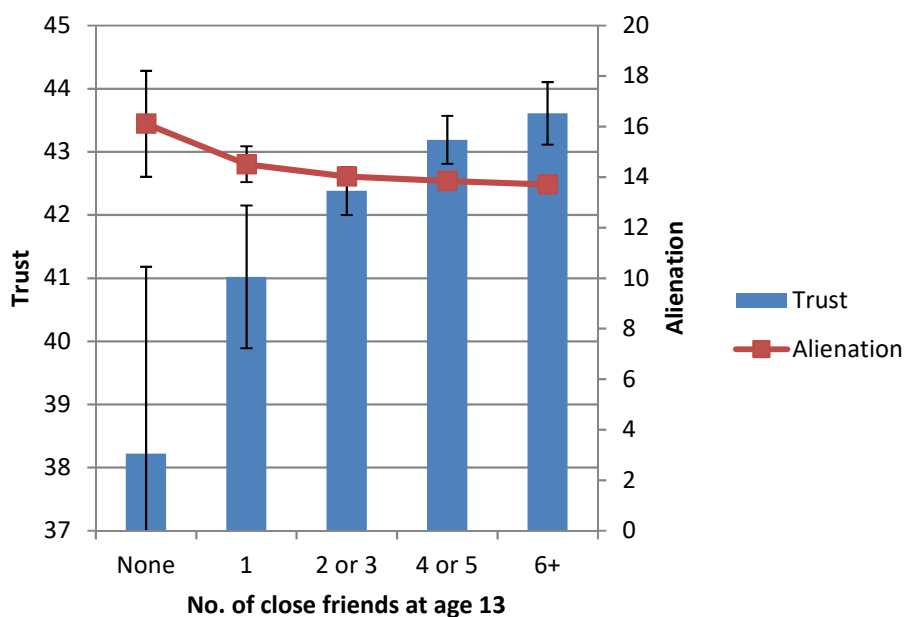
Multilevel models were used to analyse the factors associated with trust in and alienation from friends (Table 2.4). Previous international research has indicated higher-quality friendships among girls than boys during adolescence (Giordano, 2003; Crosnoe, 2011). For the **Growing Up in Ireland** sample, girls were indeed found to report higher levels of trust in their friends than boys, with a moderately strong effect size. They were also slightly more likely to report being alienated from their friends, indicating that friendship quality may not be unidimensional, but the scale of this gender difference was very small. Differences by social background (parental class, mother's education and family type) were non-significant or small in size. Young people from professional/managerial backgrounds were more likely to report feeling alienated from their friends, though there was no apparent explanation for this difference. Immigrant young people had fewer friends (see above) but had similar-quality friendships to Irish young people. Young people with the lowest levels of achievement at age nine (the bottom quintiles in reading and Mathematics) tended to report less trust and greater alienation than other young people, a pattern that may signal an association between disaffection from the peer group and disengagement from school.

Table 2.4: Multilevel models of the factors influencing (a) number of close friends at age 13 and (b) quality of friendships, using the trust and alienation scales

| | No. of close friends (compared to 2 or 3) | | | Quality of friendship | | | |
	0/1	4-5	6+	Trust	Effect size	Alienation	Effect size
Constant	0.327	0.462	0.478	40.884		13.731	
Female	1.098	1.111*	1.057	2.784***	0.416	0.259*	0.061
Class:							
Professional/managerial	0.858	1.146	0.775*	-0.145		0.518**	0.122
Non-manual/skilled manual	0.858	1.165	0.815*	-0.004		0.350±	0.082
Economically inactive	0.888	1.025	1.007	0.786±	0.117	0.301	
Mother's education:							
Upper secondary	0.976	0.972	0.798*	0.068		0.114	
Post-secondary	0.972	0.936	0.890	0.055		0.146	
Degree or higher	0.981	1.040	0.779*	-0.216		0.349	
One-parent family	0.790	0.935	0.969	-0.337		0.048	
Immigrant	1.203	0.855*	0.874*	-0.118		0.094	

	No. of close friends (compared to 2 or 3)			Quality of friendship			
	0/1	4-5	6+	Trust	Effect size	Alienation	Effect size
SEN	1.627*	0.776***	0.748*	-1.126***	0.168	0.397***	0.093
Ongoing physical illness	1.336	0.947	0.891	0.066		-0.013	
SDQ Conduct Difficulties at 9 (centred)	1.010	1.016	1.025	-0.138*	0.041	0.136***	0.064
SDQ Peer Difficulties at 9 (centred)	1.103***	0.926***	0.890***	-0.112±	0.033	0.053	
Second year	0.831	0.972	1.021	-0.575***	0.085	0.487***	0.115
Reading score at age 9:							
Quintile 2	1.058	1.298**	1.225*	0.549±	0.082	-0.141	
Quintile 3	0.808	1.121	1.016	0.518±	0.077	0.048	
Quintile 4	0.852	1.042	0.954	0.704*	0.105	0.198	
Quintile 5	1.033	1.054	0.879	0.602±	0.090	0.162	
Maths score at age 9:				0.463		-0.301	
Quintile 2	0.822	0.852	0.913				
Quintile 3	0.924	1.115	1.166	1.013***	0.151	-0.683***	0.161
Quintile 4	0.898	0.973	1.018	0.986***	0.147	-0.694***	0.163
Quintile 5	0.887	1.119	1.080	0.910**	0.136	-0.476*	0.112
Number of close friends at age 9:							
2 or 3	0.455***	1.575***	1.312*	0.678*	0.101	-0.408*	0.096
4 or 5	0.358***	2.977***	3.294***	1.098***	0.164	-0.629**	0.148
6 or more	0.338***	3.695***	7.389***	1.158***	0.173	-0.590**	0.139
Primary-school variance	0.087	0.000	0.055	0.008			0.067
Individual-level variance	-	-	-	44.918***		0.055	18.053***
Variance explained:							
Primary-school level					98.9		26.4
Individual level					4.6		1.4
No. of cases		7436		7301		7301	

Note: *** p<.001; ** p<.01; * p<.05; ± p<.10.

Even taking account of prior achievement levels, young people with a special educational need reported less trust and greater alienation from friends than other young people. Having other socio-emotional difficulties had a very modest association with friendship quality; young people who had conduct difficulties at age nine showed less trust and greater alienation. Furthermore, young people who had had more peer difficulties at age nine had less trust in their friends four years later. There was evidence of slightly lower levels of trust and higher levels of alienation among second-year than first-year students. This may reflect a change in the nature of friendships once young people have settled into second-level school and the 'honeymoon' period of first year has ended. Overall, very little of the variation (4.6% of the variance for trust, 1.4% for alienation) among 13-year-olds in friendship quality is explained by the variables included in the models, indicating the complexity of friendship dynamics (see Crosnoe, 2011).

What role did friendships play in the transition from primary to second-level education? The **Growing Up in Ireland** data yield insights into the role of friendships from two perspectives: parental perceptions of changes in friendship patterns over the transition, and multilevel modelling of the relationship between number of friends and ease of transition (explored in section 2.5). Reflecting the importance of the disruption of friendship networks in the ease of transition documented in previous research (see Chapter 1), parents were asked about the extent to which their children missed old friends and made new friends over the transition process. Just under a fifth (19%) agreed that 'my child missed old friends from primary school' while 28 per cent indicated that my 'child was anxious about making new friends'. In keeping with previous research, girls were seen as somewhat more likely to miss their old friends (21% compared with 17%). There was some evidence that young people from more socially disadvantaged backgrounds were more likely to miss their friends, but the scale of any social gradient was rather small. Young people with SEN were slightly more likely to miss their primary-school friends (23% compared with 19%). Second-year students were less likely to miss their

primary-school friends (18% compared with 21%), but the size of this difference was much less than might be expected given they had had longer to settle into the new school setting and form friendships. Anxiety about making new friends was more prevalent among girls than boys (33% compared with 24%), those from working-class and non-employed households (36% compared with 24% of those from professional/managerial households), those with less educated mothers (35% compared with 26%), those from one-parent families (34% compared with 27%) and those with a SEN (34% compared with 27%). In spite of missing old friends and being anxious about making new ones, almost all parents (96%) indicated that their child 'made new friends' over the transition. This pattern applied across all groups of young people.

Young people themselves were asked about the number of friends from their primary school who were in their second-level school in general and in their class group in particular. The majority (79%) made the transition with three or more friends from their primary school. The proportion with three or more friends in their class was lower, at 46 per cent, but 77 per cent had at least one friend in their class. There was some variation in knowing people who made the transition to their school; it was slightly lower for those from non-employed households (74%), those with graduate mothers (73%), and those with a SEN (74%). Those with graduate mothers, those from two-parent families, immigrant students, and those with a SEN were somewhat less likely to know several people in their class.

As might be expected, patterns of transfer from the primary school made a difference to transition difficulties around friendship. Those who had no-one transfer from their primary school were significantly more likely to miss their school friends than those who transferred with three or more of their friends (38% compared with 16% for those who knew someone in their school; 31% compared with 13% for those who knew someone in their class). Missing old friends was also associated with the number of friends that young people had at the age of 13 (those with one friend had the highest level). Those who did not make the transfer with school friends were also more anxious about making new friends (44% compared with 25% for school; 36% compared with 24% for class).

In sum, young people tended to increase the size of their friendship network between the ages of nine and 13, but those who had more friends at primary level had more friends after the transition to second-level education. Young people in the sample tended to report friendships characterised by high levels of trust and low levels of alienation. The potential for the transition to second-level school to disrupt friendship patterns was a source of anxiety to many young people. However, most made the transition alongside at least some peers from their primary school, and the vast majority were reported to have made new friends in their new school. The extent to which the number and quality of peer networks was related to settling into second-level education will be explored in the final section of this chapter.

2.4 TEACHERS

A large body of international research shows a strong association between the quality of relationships between teachers and students and a number of student outcomes, including engagement in schoolwork, feeling a sense of belonging in the school, levels of disciplinary problems, and academic achievement (see, for example, Eccles and Roeser, 2011; Cohen et al., 2009; Martin and Dowson, 2009; Crosnoe et al., 2004). Learning relationships are seen as deeply embedded in interpersonal relationships in the school community (Tobbell and O'Donnell, 2013). In the Irish context, negative interaction with teachers has been found to be strongly predictive of early school-leaving, educational aspirations, and grades in the Junior and Leaving Certificate examinations (Byrne and Smyth, 2010; Smyth et al., 2011).

The *Growing Up in Ireland* survey asked the 13-year-olds about the frequency of different types of positive and negative interaction with their teachers in the two weeks prior to the survey, using a measure that had proved highly predictive of student outcomes in a range of previous Irish studies (Hannan et al., 1996; Smyth, 1999; Smyth et al., 2011) (see Figure 2.8). Positive interaction included being praised for their schoolwork or for answering questions in class; negative interaction included being reprimanded or 'given out to' (scolded) by teachers. Positive interaction and engagement with teachers were found to be more frequent than negative interaction. The majority (71%) of young people reported that teachers had 'very often' or 'often' asked them questions in class. However, it appears that classroom interaction was more strongly directed by the teacher than the student since fewer young people (49%) reported that they had been encouraged to ask questions in class. Young people reported being frequently praised by their teachers for their schoolwork (70% 'very often' or 'often') and for answering questions in class (52% 'very often' or 'often'). Only a minority of the 13-year-olds reported frequent reprimands from teachers for their schoolwork or for misbehaviour (10% and 12% 'very often' or 'often' respectively). However, a significant minority – four in 10 – reported being given out to (scolded) by teachers 'a few times'.

Figure 2.8: Frequency of positive and negative interaction with teachers among 13-year-olds
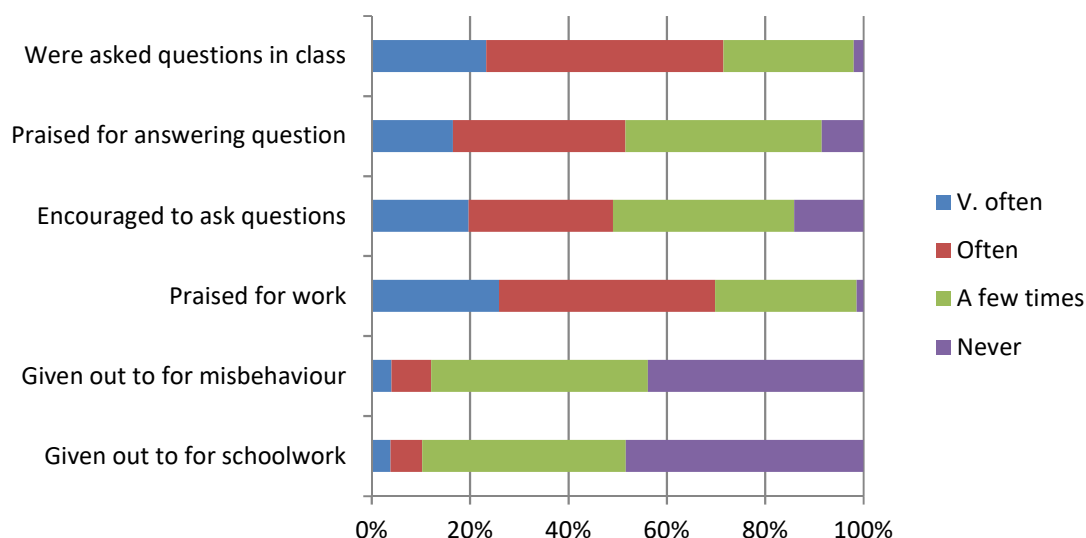
These items formed the basis for two scales: positive interaction and negative interaction (see Chapter 1). Multilevel models were used to identify the factors associated with the quality of interaction with teachers (Table 2.5). There were significant gender differences, with girls experiencing more frequent positive interaction and less frequent negative interaction than boys. This pattern is consistent with previous research on junior-cycle students (Smyth et al., 2007). Experience of positive interaction did not vary significantly by social background. However, differences were evident in relation to family structure; young people from one-parent families were less likely to experience positive interaction. Experience of negative interaction was more significantly related to social background than was the case with positive interaction; those whose mothers had upper secondary or degree-level qualifications were less likely to report negative interaction with their teachers than other groups. Young people from one-parent families were more likely to report more frequent negative interaction with their teachers than those from two-parent families. These social-background differences are relatively small in scale but notable because they were evident net of prior achievement and may point to a different dynamic of teacher-student relations for more disadvantaged groups of young people.

There were no differences between immigrant and Irish young people in the quality of interaction with teachers. Young people with special educational needs were more likely to report negative interaction and less likely to report positive interaction than their peers. As might be expected, young people who were considered to have greater conduct difficulties at age nine were less likely to have positive interaction and more likely to have negative interaction with teachers at the age of 13; at the same time, the scale of this difference is rather smaller than might be expected. While this may suggest parent ratings of conduct do not reflect school-based behaviour, the correlation between teacher-rated conduct at age nine and later transition difficulties was even weaker than for parent-rated conduct. It is more likely to reflect the fact that the nature of teacher-student interaction reflects the specific school environment, leading to a difference in interaction patterns between primary and second-level education (see Chapter 1). Those who had peer difficulties at the age of nine were less likely to have negative interaction with teachers, which may reflect withdrawal rather than 'acting out' among these students.

Those who had higher primary achievement levels had more positive interaction with their teachers than lower-performing students. Negative interaction was less closely associated with prior achievement; only the highest-achieving Maths students had significantly lower levels of negative interaction. Stage of education was found to make a significant difference, with higher levels of negative interaction between teacher and second-year students. This is consistent with previous research, which showed that second year is a key period for disengagement from school and the development of a more negative dynamic in interacting with teachers (Smyth et al., 2007). Although significant relationships were identified in the models presented in Table 2.5, it is worth noting that only a small proportion of variance (3.7% for positive interaction, 6.6% for negative interaction) was explained by these variables; other factors, therefore, such as individual teaching styles and student behaviour in specific classes, are likely to have influenced the quality of interaction.

Table 2.5: Factors associated with the nature of interaction of 13-year-olds with their teachers

	Positive interaction	Effect size	Negative interaction	Effect size
Constant	2.654		1.743	
Female	0.113***	0.213	-0.249*	0.404
Class:				
Professional/managerial	-0.020		0.016	
Non-manual/skilled manual	-0.037		0.054	
Economically inactive	0.043		0.047	
Mother's education:				
Upper secondary	0.022		-0.093***	0.151
Post-secondary	-0.006		-0.040	
Degree or higher	0.041		-0.047±	0.076
One-parent	-0.091***	0.172	0.125***	0.120
Immigrant	-0.001		0.002	
SEN	-0.093***	0.175	0.074***	0.188
Ongoing physical illness	-0.001		-0.043	
SDQ Conduct Difficulties (centred)	-0.012*	0.045	0.058***	0.188
SDQ Peer Difficulties (centred)	0.007		-0.024***	0.078
Second year	-0.007		0.171***	0.278
Reading score at age 9:				
Quintile 2	0.04		-0.002	
Quintile 3	0.033		0.005	
Quintile 4	0.120***	0.226	-0.002	
Quintile 5	0.165***	0.311	-0.017	
Maths score at age 9:				
Quintile 2	-0.012		-0.036	
Quintile 3	0.001		-0.016	
Quintile 4	0.025		-0.043	
Quintile 5	0.048±	0.091	-0.064*	0.104
Primary school variance	0.004*		0.005*	
Individual variance	0.285***		0.380***	
% of variance explained:				
School level	33.30		50.00	
Individual level	3.70		6.60	
Number of cases:				
School	877		877	
Student	7367		7370	

*Note: *** p<.001; ** p<.01; * p<.05; ± p<.10.*

Additional analyses (not shown here) were conducted to explore whether the quality of interaction with teachers was related to current levels of misbehaviour. Separate analyses were run to take account of two different measures: SDQ conduct difficulties at age 13 (as rated by the mother), and a scale of the frequency of school-based misbehaviour and associated sanctions (such as detention). The latter scale was based on the frequency with which young people (at age 13) reported the following over the past year: being late for school, getting into trouble for not following school rules, missing classes ('mitching'), messing in class, having to do extra work as punishment, having to do detention at school, and being suspended from school. The scale had a reliability of 0.748.

Analysis of conduct difficulties at age 13 found significant associations with positive and negative interaction; that is, where mothers reported greater conduct difficulties among their teenage children, they were more likely to experience negative interaction with teachers and less likely to report positive interaction. When conduct difficulties at age 13 were taken into account, the relationship between other factors (such as year group and having a special educational need) and interaction with teachers remained the same. However, the coefficient for conduct difficulties at age nine then became statistically insignificant. This does not mean that earlier conduct difficulties had no impact on later interaction; rather it is the case that conduct difficulties at both ages were shaped by similar processes but that young people who exhibited conduct difficulties at nine but not at 13 were no different in the quality of their interaction with teachers from those who had no such difficulties at nine.

School-based misbehaviour at 13 was strongly associated with interaction with teachers, measured at the same time-point. Measures of conduct and misbehaviour at age 13 accounted for a substantial proportion of the gender gap in negative interaction patterns as well as for much of the difference found by SEN and family structure. Thus, a dynamic of 'acting up' and 'giving out' appeared to be emerging, especially for boys, those with SEN and those from lone-parent families. In contrast, measures of conduct difficulties at age nine accounted for very little of the gender difference in interaction with teachers at age 13, again suggesting differential interaction patterns at primary and second-level stages. The analyses indicated that, even taking account of levels of misbehaviour, high-achieving students and those in first year had less frequent negative interaction with their teachers.

2.5 SOCIAL RELATIONSHIPS AND TRANSITION DIFFICULTIES AMONG YOUNG PEOPLE

This chapter has focused on the relationships with parents, friends and teachers that young people experienced as they moved into adolescence. This section explores whether these relationships were associated with young people's experience of the transition to second-level education. Figure 2.9 shows parental responses regarding different dimensions of transition difficulties among young people. The vast majority of parents, over nine in 10, felt that their child had settled well into secondary school. A similar proportion felt that their child was coping well with schoolwork and did not receive too much homework. A significant minority expressed some concerns about their child's social adjustment; 28 per cent reported that their child had been anxious about making new friends and a fifth reported that their son/daughter missed their primary-school friends. On a more positive note, the vast majority of parents reported that their child had made new friends in the new school setting. These different items were combined into an overall scale, which ranged from 6 to 35; the average level of difficulties was 13.7, with a standard deviation of 3.9. As discussed in Chapter 1, the reliability (alpha of 0.59) is lower than might be desired and reflects the fact that reported difficulties were less frequent for some items (such as coping with schoolwork) compared to others (such as missing friends). It is worth noting that equivalent questions were not asked of the young person themselves, but the measures of peer relationships, school engagement and academic self-image do provide additional insights into experiences over the transition process (see Chapter 3). Previous research has indicated that parents tend to be more positive about their children's transition experiences than the young people themselves (Smyth et al., 2004) so these analyses should be taken in tandem with analyses presented in Chapters 3 and 4 to provide a more comprehensive overview of transition experiences.

Figure 2.9: Prevalence of transition difficulties among young people, as reported by the Primary Caregiver
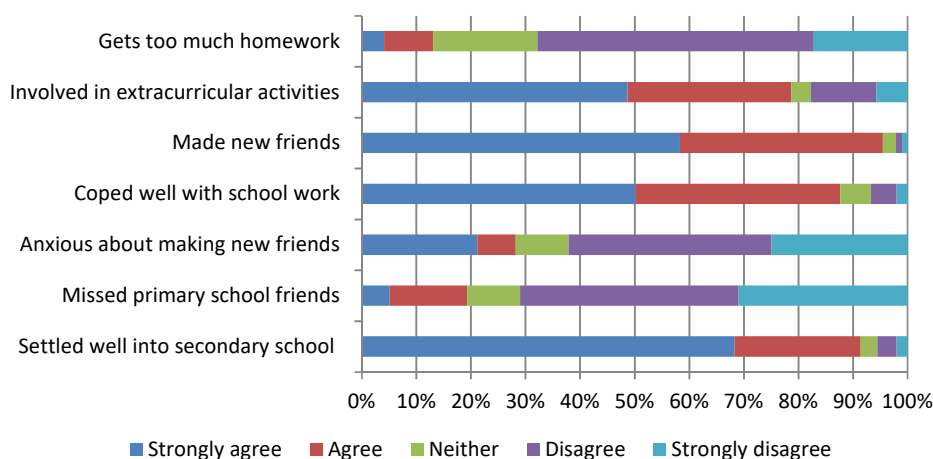
Multilevel models were used to explore the relationship between parental involvement in school and quality of relations with peers and teachers and the experience of transition difficulties. It should be noted that the transition difficulties items relate to making new friends and missing old ones rather than the number and quality of friendships. Thus, it is possible that young people may have retained the same friends over the transition but might still have been anxious about making friends in the new school setting.

Transition difficulties were found to vary significantly by background factors (Table 2.6); this social differentiation was not accounted for by differences in the relationships with parents, peers and teachers among young people. Figure 2.10 shows the predicted level of transition difficulties by a selection of background factors, holding constant other characteristics used in the model. In keeping with previous research (O'Brien, 2003), girls experienced greater difficulties over the transition than boys. Despite greater average difficulties among girls, additional analyses (not shown here) indicated no gender differences in the relationship between other factors and transition difficulties for girls and boys. Having greater educational and social resources in the family was associated with an easier transition process. Working-class young people (that is, those with semi/unskilled manual and non-employed parents) and those with less highly educated mothers thus experienced greater transition difficulties than their more advantaged peers. Even controlling for social class and parental education, young people from one-parent families encountered greater difficulties in making the transition than those in two-parent families.

Young people from immigrant families had greater transition difficulties than their Irish peers, a pattern that was not explained by differences in their background, prior achievement or social relationships. One of the largest differences in terms of effect size was found between young people with special educational needs and their peers, with the former experiencing significantly greater transition difficulties. Somewhat surprisingly, young people who had conduct difficulties at age nine did not differ from their counterparts in their experiences of the transition process[10]. In contrast, those who had difficulties in peer relations experienced greater transition difficulties, other factors being equal. Interestingly, this pattern was not only evident in relation to the friendship items but also to other aspects of transition difficulties, suggesting that young people who had difficulties interacting with peers may have also been less adaptable in facing a new school environment. Having an ongoing physical illness was associated with somewhat greater transition difficulties, but the difference was relatively small. In sum, young people whose parents had greater cultural and social resources experienced a smoother transition to second-level education. This effect was net of the young person's prior achievement levels.

Figure 2.10: Predicted transition difficulties among young people by gender, parental education, migrant status and prior Maths achievement at age 9
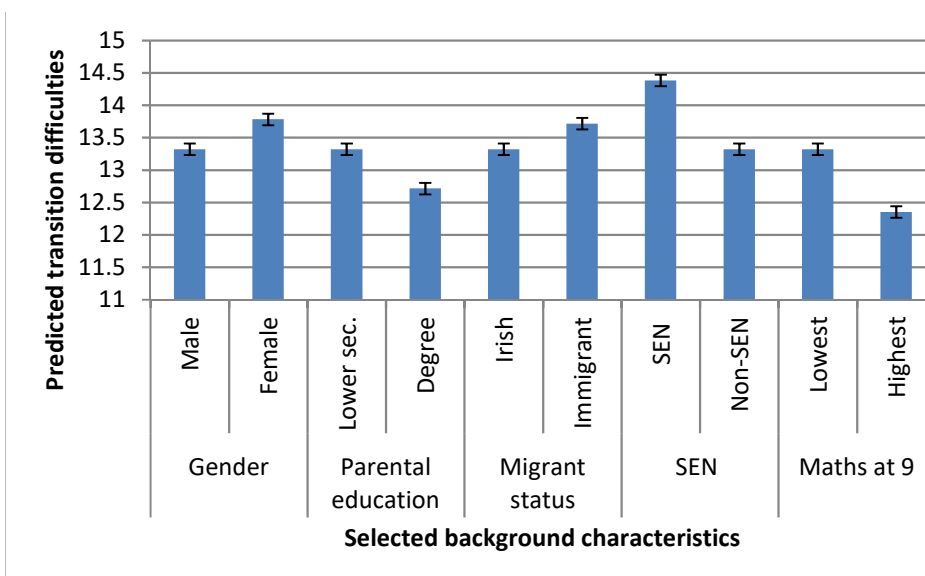
Note: This figure uses the coefficients presented in Table 2.4 derived for the base category (male, working-class, low education, two parents, first year, no physical illness), those with middle quintile reading and Maths test scores, and those with average SDQ scores.

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[10]   *Additional analyses indicated that teacher ratings of SDQ conduct at age nine, which might be expected to better reflect the child's behaviour in class, had an even weaker correlation with transition difficulties than was the case for parent ratings.*

Young people with higher levels of prior achievement in reading and Maths experienced fewer transition difficulties, with a stronger relationship for Maths achievement[11]. Thus, achievement at primary-school level appeared to provide young people with the literacy and numeracy skills to cope with the second-level curriculum. Second-year students had experienced significantly greater transition difficulties than first-year students. There are two possible explanations for this surprising finding. Parents may have been reflecting on more negative relations with teachers and greater disengagement from school among second-years as evidence of settling-in difficulties. On the other hand, it may reflect the fact that second-years made the transition at a much younger age and that their resulting lack of maturity made the transition process more challenging.

The main focus of the analyses was to assess the influence of social relationships on the transition process. Predicted levels of transition difficulties by selected social-relationship variables are shown in Figure 2.11. Parental involvement in education was examined in terms of frequency of help with homework when the child was nine, attendance at parent-teacher meetings at both nine and 13, and attendance at another school-based event at age 13. The findings reflect the necessity of considering different aspects of parental involvement in children's schooling. Young people whose parents 'rarely' or 'never' helped with their homework at primary school were less likely to experience transition difficulties. Rather than reflecting a lack of parental involvement, this pattern indicates less need for help with homework and therefore young people's greater academic preparedness for making the transition to second-level education. Young people whose parents had more formal contact with the school in the form of attending a parent-teacher meeting or other school event had fewer transition difficulties, but these effects were small in size[12]. Broader social support and the quality of relations with parents were also examined. Young people who had more demanding mothers experienced fewer transition difficulties but the size of the effect was very small. The mother's responsiveness when the child was nine was no longer significant when frequency of communication at age 13 was taken into account. Less frequent communication between parents and children was found to be associated with greater transition difficulties; this effect was stronger than that found for formal parental involvement in the school.

Figure 2.11: Predicted transition difficulties among young people by frequency of talking with parents, number of close friends, level of trust in friends, and frequency of positive interaction with teachers
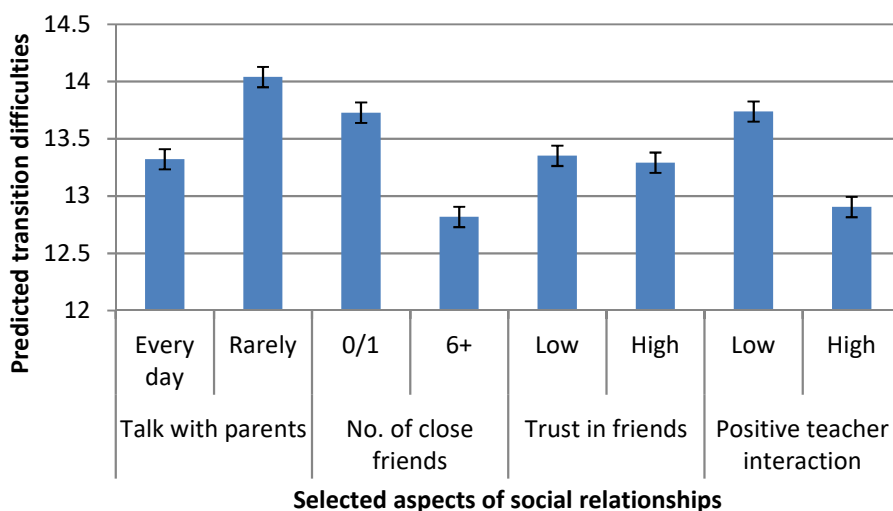
Note: This figure uses the coefficients presented in Table 2.4 derived for the base category (male, working-class, low education, two parents, first year, no physical illness), those with middle quintile reading and Maths test scores, and those with average SDQ scores.

Social relationships with peers were measured in terms of the number of close friends at the age of nine and the quality of relationships with friends at age 13[13]. Young people who had no or only one close friend at the age of nine had the greatest transition difficulties, while such difficulties were least prevalent for those with a large group of close friends (six or more). Controlling for the number of friends, the quality of friendship networks was also predictive of transition difficulties; those who trusted their friends had fewer difficulties while those who felt alienated from their friends had greater transition difficulties.

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[11]   *The effects of reading achievement were significant when Maths was not included in the model.*

[12]   *The effect for attending a parent-teacher meeting was significant at age nine but not at age 13.*

[13]   *These measures were used because there was no measure of quality of friendship at age nine. The number of close friends at age 13 was highly correlated with the number at age nine, so was not included in the model.*

Attitudes to their teacher at age nine were only weakly associated with the prevalence of transition difficulties; those who 'sometimes' liked their teacher had fewer difficulties. The quality of interaction with second-level teachers was more strongly associated with the ease of settling into second-level education. Young people who experienced more positive interaction with their teachers had fewer difficulties adapting to the new school setting. Negative interaction with teachers was not significantly associated with transition difficulties. Further analyses explored whether this (and other factors) varied across social groups. Negative interaction was found to be significantly associated with transition difficulties for young people with less educated mothers but not for the other groups. It may be that having greater cultural resources in the family acted as a buffer against teacher reprimands for these young people from more advantaged families.

Taking account of social background and social relationships, significant variation in transition difficulties was found by the primary school attended. This may reflect differences in the approach taken to preparing students for the transition and/or variation in the degree of contact between the primary and second-level schools.

Social background and social relationships explained a third of between-school variation and 11 per cent of between-young person variation in transition difficulties. This suggests that, although social relationships emerge as important, a number of other young-person and school factors influenced the nature of the transition process.

Table 2.6: Multilevel model of the association between relationships with parents, peers and teachers and the level of transition difficulties experienced by young people

	Level of transition difficulties	Effect size
Constant	13.321	
Female	0.461***	0.132
Class:		
Professional/managerial	-0.612***	0.175
Non-manual/skilled manual	-0.352*	0.100
Economically inactive	-0.093	
Mother's education:		
Upper secondary	-0.496***	0.142
Post-secondary	-0.676***	0.193
Degree or higher	-0.607***	0.174
One-parent family	0.512***	0.146
Immigrant	0.395***	0.113
SEN (as reported at 9)	1.062***	0.304
Ongoing physical illness (at 9)	0.309*	0.088
SDQ Conduct Difficulties (centred) (at 9)	0.009	
SDQ Peer Difficulties (centred) (at 9)	0.210***	0.120
Second year	0.381***	0.179
Reading score at age 9:		
Quintile 2	-0.016	
Quintile 3	-0.021	
Quintile 4	-0.055	
Quintile 5	-0.107	
Maths score at age 9:		
Quintile 2	-0.410**	0.117
Quintile 3	-0.522***	0.149
Quintile 4	-0.832***	0.238
Quintile 5	-0.969***	0.277
Parental help with homework when child was 9 years of age:		
Regularly	0.044	

	Level of transition difficulties	Effect size
Now and again	-0.055	
Rarely	-0.425**	0.122
Never (Ref.: Always/nearly always)	-0.771**	0.220
Attendance at formal parent-teacher meetings:		
When child was 9	-0.442**	0.126
When young person was 13	-0.061	
Attended other school-based event when young person was 13	-0.200*	0.057
Demandingness of mother (at 9)	-0.065*	0.037
Responsiveness of mother (at 9)	0.013	
Frequency of parents and their children talking together (at age 13):		
3-6 days a week	0.523***	0.150
Less often (Ref.: Every day)	0.718***	0.205
Number of close friends at age 9:		
None/one	0.407*	0.116
4 or 5	-0.142	
6 or more	-0.504***	0.144
(Ref.: 2 or more)		
Level of trust in friends at 13	-0.030***	0.017
Level of alienation from friends at 13	0.098***	0.056
Liking teacher at age 9:		
Sometimes	-0.221*	0.063
Never	0.126	
(Ref.: Always)		
Positive interaction with teachers at 13	-0.417***	0.238
Negative interaction with teachers at 13	0.033	
Primary school variance	0.731***	
Individual variance	12.241***	
% variance explained:		
Primary school level	33.06	
Individual level	11.14	
Number of cases:		
Schools	877	
Individuals	7411	

*Note: *** p<.001; ** p<.01; * p<.05; ± p<.10.*

2.6 SUMMARY

This chapter has explored the nature of social relationships over the period from nine to 13 years of age and the implications for adjusting to second-level education. As young people grew older, the majority (73%) of parents were less involved in helping their children with homework but the vast majority (88%) attended school-based meetings and four-fifths reported that their children wanted to tell them about how they were getting on at school. Attendance levels at school-based meetings and events were high across all social groups, but were somewhat lower where mothers had themselves dropped out of school before Leaving Certificate level. This pattern is consistent with previous research, which shows it may be difficult for schools to engage parents who had a negative experience of their own school days (Byrne and Smyth, 2011). Parents appeared to be highly reliant on their children as a source of information about what was going on in school. The greater reluctance of boys to discuss school resulted in a gender gap in reported parental knowledge about school.

Despite the potential disruption to friendship networks over the transition period, with groups of friends often moving to different second-level schools, there was a good deal of stability in the number of close friends between the ages of nine and 13, though there was a tendency for the proportion of young people with large groups of friends to increase. Friendship groups were generally characterised by a high degree of trust and a low degree of alienation. Immigrant young people and those with special educational needs emerged as more socially isolated than their peers. Second year seemed to emerge as a turning-point in friendships, with less trust and more alienation than among first-year students.

The quality of interaction with teachers appeared to be more positive (in terms of praise and feedback) than negative (in the form of being scolded or reprimanded). However, there were significant differences between young people in the nature of interaction with teachers. There were clear gender differences; boys were less likely to experience positive interaction and more likely to experience negative interaction, which may be largely but not entirely explained by patterns of school misbehaviour at 13. Having had conduct difficulties at age nine was related to more negative and less positive interaction with teachers at the age of 13; however, this effect was not strong, suggesting that some aspects of the teacher-student interaction dynamic were context-specific. Higher levels of prior achievement were associated with more positive interaction and less negative interaction with teachers, even taking account of prior conduct and current misbehaviour levels. All else being equal, young people from less educated families, from one-parent families and with special educational needs experienced more negative interaction with teachers. As with friendship, second year was a turning-point in relations with teachers, with more negative interaction relative to first year.

The measure of transition difficulties was based on parental report and therefore may underestimate the level of difficulties found (see Smyth et al., 2004). As reported by parents, young people experienced relatively few difficulties in settling into second-level education, although a significant minority felt that their children were anxious about making new friends and missed their primary-school friends. Second-year students were described as having greater transition difficulties, which may be related to their younger age on making the transition. The quality of social relationships was associated with the extent of transition difficulties. Parental involvement in the school, frequent communication with parents, a larger friendship network characterised by trust, and more positive interaction with teachers were all significantly related to the ease of transition to the second-level school setting. The extent to which interaction with teachers was related to other aspects of school engagement will be explored in the following chapter.

Chapter 3
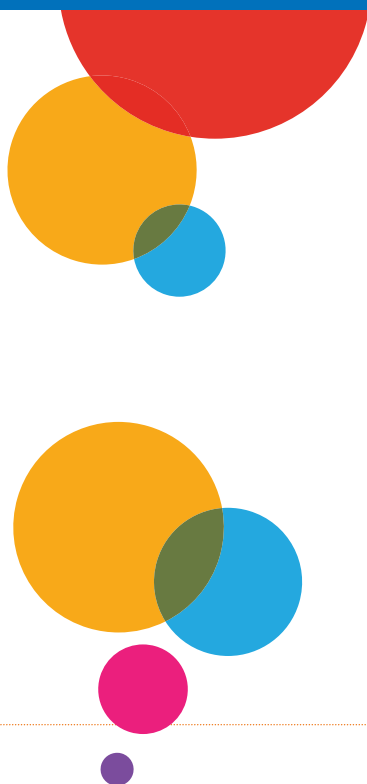
3.1 INTRODUCTION

Chapter Two examined some aspects of the social context within which young people's learning took place. This chapter explores the extent to which their engagement in schooling changed over the course of the transition from primary to second-level education. In particular, the chapter identifies the factors, including interaction with teachers, that were associated with enhanced or reduced school engagement. There has been a good deal of debate as to how best to conceptualise and measure student engagement (Fredericks et al., 2004). Here a multidimensional approach is taken to analysing school engagement, with the focus on liking school, liking school subjects, academic self-concept and school attendance.

3.2 ATTITUDES TO SCHOOL AMONG 13-YEAR-OLDS

Most 13-year-olds in the **Growing Up in Ireland** study had positive attitudes to school: 29 per cent liked it 'very much' and a further 32 per cent 'quite a bit'. Over a quarter of 13-year-olds described themselves as only liking a school 'a bit', while 8 per cent said they did not 'like it very much' and 3 per cent 'hated' school. Figure 3.1 illustrates the striking differences found by gender, with females significantly more likely to like school 'very much' than males (35% compared with 23%).

Figure 3.1: Attitudes to school at age 13 by gender
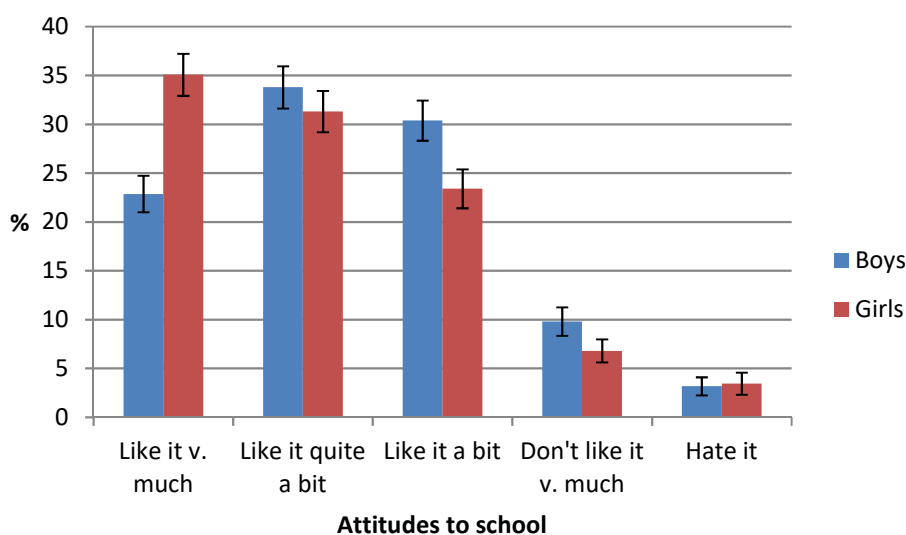
With two waves of **Growing Up in Ireland** data, it is possible to explore whether attitudes to school were stable as young people grew older. The wording of the response was different at ages nine and 13, reflecting the greater nuance possible with the older group. For the purposes of the analyses presented here, 'always liking school' at age nine was taken as equivalent to 'liking school very much' or 'liking school quite a bit' at 13; 'sometimes liking school' at nine to 'liking school a bit' at 13; and 'never liking school' at nine to 'not liking it very much' or 'hating it' at 13[14]. Analyses then identified patterns of responses between the two waves as 'improving', 'stable' or 'declining'.

Figure 3.2 indicates a significant relationship between attitudes to school at age nine and attitudes at age 13; in other words, young people who were positive about school at the earlier time-point were more likely to be positive four years later. In spite of this relationship, there was notable fluidity in attitudes to school. Almost a third (30%) of those who 'always' liked school at the age of nine had mixed or negative views at 13, liking school 'a bit', 'not very much' or 'hating' it. At the other end of the spectrum, a very significant proportion (43%) of young people who 'never' liked school at the age of nine liked it 'very much' or 'quite a bit' four years later.

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[14]   *This matching is by necessity somewhat crude but the analyses presented in the remainder of the section also focus on the extent to which attitudes at age nine were related to attitudes at 13, so are not affected by these assumptions.*

Figure 3.2: Attitudes to school among young people at 13 of years of age by their attitudes to school at age 9
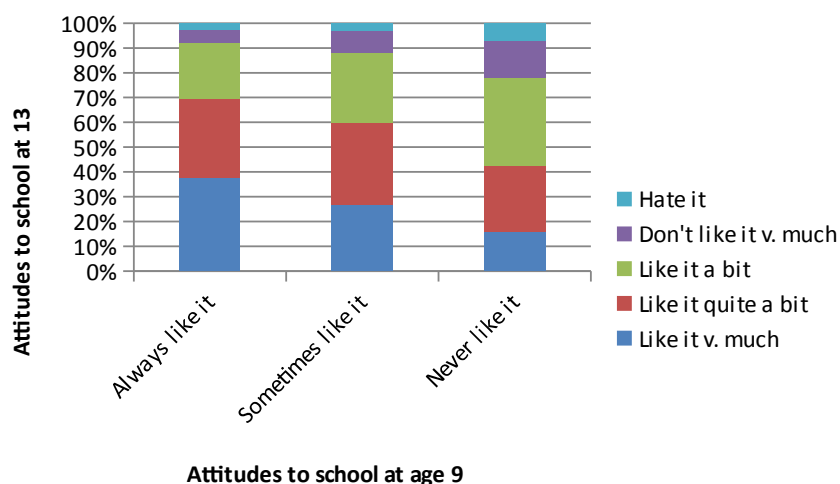
In the remainder of this section, the analyses test whether attitudes to school were stable over time. They also shed light on two potential reasons for this stability; first, that they reflected the same underlying factors (for example, social background), and secondly, that a positive experience of primary school was associated with later positive attitudes, other factors being equal. Multilevel models were used to look at the factors predicting attitudes to school at age 13 (Tables 3.1a to 3.1c). The first set of models looks at the association of individual and social-background characteristics with school engagement; the second set of models controls for attitudes at age nine. The other models control progressively for the experience of transition difficulties, the quality of interaction with teachers, and engagement with school subjects (namely, English, Maths, Irish and Science). In the models, not liking school very much/hating it, liking school 'a bit' and 'quite a bit' are contrasted with liking school 'very much'.

In keeping with the descriptive analysis presented above, girls had significantly more positive attitudes to school at the age of 13 than boys. This gender difference held even when a range of other social-background factors and having a special educational need were taken into account; girls were half as likely as boys with similar characteristics to not like or hate school (Model 1). These gender differences are in part explained by more positive primary-school experiences and by more positive relations with their teachers among girls. Additional analyses (not shown here) showed that gender differences in not liking or hating school were further reduced when conduct difficulties and misbehaviour at 13 were taken into account.

Not surprisingly in the context of previous research on school engagement (Fredericks et al., 2004), attitudes to school were associated with a number of aspects of social background. When parental social class was considered separately (analyses not shown here), young people from the professional/managerial group were found to be least likely to have negative attitudes to school, while those whose parent(s) were economically inactive had much more negative attitudes. On closer investigation, this pattern was found to be related to parental education; that is, young people from non-employed households had more negative attitudes to school largely because their parents had lower levels of educational qualifications, with no net impact of social class when parental education was taken into account (Model 1, Table 3.1a). Parental education was significantly associated with school attitudes; the most positive attitudes were found among those whose parents had third-level degrees and the most negative attitudes among those whose parents had lower secondary education or less. Even controlling for social class and parental education, those from one-parent families were more likely to have negative attitudes to school than those from two-parent families; this group of young people were around twice as likely to fall into the not liking/hating school category. There were few consistent differences between immigrant and Irish young people. Young people with special educational needs were significantly more likely than their peers to have negative attitudes to school; they were 1.3 times more likely than young people without a SEN to hate or not like school. This pattern is largely, but not entirely, accounted for by a greater prevalence of transition difficulties and by the quality of interaction with teachers among this group (see Chapter Two). Conduct and peer difficulties, measured at the age of nine from the mother's perspective[15], had no significant relationship with attitudes to school at the age of 13.

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[15] *As was the case with interaction with teachers, teacher-reported conduct difficulties were more weakly associated with attitudes to school at age 13 than parent-reported difficulties.*

Model 2 considers a number of measures of attitudes to school at age nine. These include liking school, liking teachers and attitudes to reading and Maths (as school subjects). Attitudes to school at age nine were highly predictive of attitudes four years later, even controlling for gender, social background and having a SEN. Thus, those who 'never' liked school at age nine were 2.8 times more likely to say they didn't like or 'hated' school at 13 than those who 'always' liked school at the earlier time-point. Relations with teachers at age nine had a strong association over and above attitudes to school; those who 'never' liked their teacher were almost three times as likely to have negative views of school at age 13 (Model 2, Table 3.1a). Attitudes to reading and Maths at school had an additional association with later attitudes; those who sometimes or never liked the subjects were significantly more likely to report negative attitudes to school at age 13. This pattern suggests a longer-term impact of early engagement with school subjects on later outcomes.

Model 3 includes reading scores at age nine, divided into quintiles (fifths). Those in the lowest reading quintile had the most negative attitudes to school at age 13, but there was relatively little variation among the other groups. Thus, the relationship between prior achievement and later attitudes is complex. Attitudes to school, teachers and subjects at age nine remained predictive of attitudes at 13, even controlling for prior reading score; thus, the pattern was not merely driven by greater disengagement among lower-achieving students.

Model 4 looks at whether the transition process was associated with later attitudes to school. Because the 13-year-olds were more or less evenly divided between first and second year, a dummy variable was used to indicate their educational stage (year group). Other factors being equal, second-year students were significantly more likely to fall into the group that did not like or hated school; the difference is marked, a ratio of 2.2 times more than first-years, and is consistent with previous research on changes in attitudes over junior cycle (Smyth et al., 2007). Young people whose parents reported that they had experienced a more difficult transition to second-level education were also more likely than their peers to have negative attitudes to school.

Model 5 looks at the quality of interaction with second-level teachers. In keeping with previous research (Cohen et al., 2009; Martin and Dowson, 2009; Crosnoe et al., 2004), the nature of teacher-student interaction was strongly related to attitudes to school. Thus, young people who experienced positive interaction with their teachers in the form of praise or positive feedback had much more positive attitudes to school than their peers. On the other hand, those who had experienced negative interaction with teachers, being reprimanded on a frequent basis, were significantly more likely to have negative views of school, even controlling for their attitudes at primary-school level and a rich range of measures of social background. Figure 3.3 shows the predicted attitudes to school by experience of positive and negative interaction with teachers. Those who experienced high levels of positive interaction and very low levels of negative interaction had very positive attitudes to school, with 83 per cent liking school 'very much' or 'quite a bit'. In contrast, those with low levels of positive interaction and high levels of negative interaction had very negative attitudes, with 49 per cent not liking school or only liking it 'a bit'. Additional analyses (not shown here) were conducted to test whether the influence of negative interaction on school engagement merely reflected more behaviour difficulties among disengaged students. SDQ conduct difficulties at age 13 were not found to be significantly related to attitudes to school. In contrast, self-reported school-based misbehaviour at age 13 was significantly associated with not liking school. The relationship between interaction with teachers and attitudes to school remained strong net of misbehaviour, suggesting the importance of the quality of teacher-student interaction in shaping disaffection.

Even taking account of student characteristics, attitudes to school varied significantly by the primary school attended, with the greatest difference found in the proportion that did not like or hated school (Table 3.1a, Model 1). Some of this variation was related to the attitudes to school, teachers and subjects and the literacy and numeracy skills developed at primary level (compare models 2 and 3).

Further analyses were conducted (not shown here) to explore whether the factors associated with liking school differed by gender and social background. No such differences were found by social background; thus, advantaged and less advantaged groups had similar patterns of variation by prior and current school experience. There were slight differences by gender. First, the relationship between positive teacher interaction and not liking/hating school was slightly weaker for boys than girls (but was significant for both groups). Secondly, the relationship between being in second year and not liking/hating school was stronger for boys than girls, in keeping with previous research which showed greater disengagement among boys as they moved through junior cycle (Smyth et al., 2007).

Figure 3.3: Predicted attitudes to school among 13-year-olds by frequency of positive and negative interaction with teachers
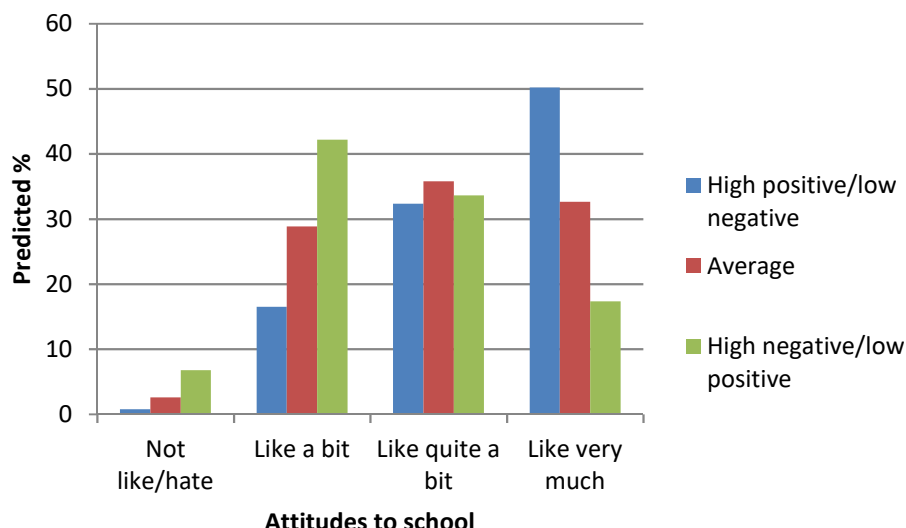
Note: This figure uses the coefficients presented in Table 3.1b derived for the base category (male, working-class, low education, two parents, first year, no physical illness), those with middle quintile reading and Maths test scores, and those with average SDQ scores.

The extent to which experience of subjects in second-level education was associated with overall attitudes to school is explored in Table 3.1c. Two dimensions of subject engagement were considered: finding the subject difficult and finding the subject interesting. Because of correlations between perceived difficulty of and interest in a subject, the two sets of factors were considered separately for these models. There are important distinctions between the two concepts so they do not form an overall scale of subject attitudes. A student may find a subject difficult because they are taking it at a higher level but still may find it interesting. Overall, students who found English, Maths, Irish and Science difficult were more likely to have negative attitudes to school than their peers. Thus, for example, 13-year-olds who found Irish difficult were 2.7 times more likely to dislike school than those who found the subject 'OK'. Young people who found these four subjects interesting were more likely to have positive attitudes to school than their peers. Finding Maths and Irish difficult and uninteresting was more strongly associated with disaffection from school than attitudes to English or Science.

Table 3.1a: Multilevel multinomial logistic regression models of the factors associated with liking school at age 13 (contrasted with liking school 'very much')

	Model 1 (Odds ratios)			Model 2 (Odds ratios)			Model 3 (Odds ratios)		
	Not liking/ hating	Liking a bit	Liking quite a bit	Not liking/ hating	Liking a bit	Liking quite a bit	Not liking/ hating	Liking a bit	Liking quite a bit
Constant	0.574	1.373	1.401	0.197	0.622	0.972	0.232	0.578	0.887
Female	0.504***	0.478***	0.629***	0.584***	0.517***	0.657***	0.588***	0.512***	0.654***
Class:									
Professional/managerial	0.931	0.837	1.063	0.903	0.795*	1.008	0.938	0.795*	0.991
Non-manual/skilled manual	1.218	0.943	1.123	1.184	0.901	1.064	1.208	0.902	1.055
Economically inactive (Ref.: Semi/unskilled manual)	1.369	1.025	1.182	1.411	1.024	1.164	1.418	1.020	1.166
Mother's education:									
Upper secondary	0.694*	1.089	0.992	0.675*	1.071	0.953	0.689*	1.077	0.979
Post-secondary	0.654*	0.974	0.940	0.657*	0.970	0.928	0.669*	0.976	0.920
Degree or higher (Ref.: Lower econdary)	0.506**	0.759*	0.831±	0.481**	0.726*	0.800*	0.499**	0.745*	0.794*
One parent	1.978**	1.393**	1.135	2.010**	1.412**	1.138	2.004**	1.418**	1.143
Immigrant	0.834	0.847*	0.906	0.875	0.885	0.933	0.872	0.886	0.937
SEN	1.323**	1.260**	1.025	1.285**	1.255**	1.045	1.220±	1.273**	1.071
Physical illness	1.073	0.958	0.916	1.181	0.976	0.918	1.120	0.987	0.919
SDQ conduct at 9	1.036	1.001	0.962	1.004	0.993	0.954	0.998	0.992	0.955
SDQ peer problems at 9	0.991	0.990	1.000	0.995	0.994	1.007	0.994	0.998	1.009
Attitudes to school at 9:									
Sometimes like it				1.767**	1.624**	1.307*	1.797**	1.610**	1.296*
Never like it				2.754***	1.791**	1.000	2.723***	1.775**	1.008

	Model 1 (Odds ratios)			Model 2 (Odds ratios)			Model 3 (Odds ratios)		
	Not liking/ hating	Liking a bit	Liking quite a bit	Not liking/ hating	Liking a bit	Liking quite a bit	Not liking/ hating	Liking a bit	Liking quite a bit
Attitudes to teacher at 9:									
Sometimes like				1.323**	1.275**	1.261**	1.353**	1.281**	1.256**
Never like				2.915***	1.456**	1.191	2.977***	1.445**	1.194
Attitudes to reading at 9:									
Sometimes like				1.315**	1.307**	1.107±	1.274**	1.285**	1.115±
Never like				1.582**	1.470*	1.261*	1.483**	1.465*	1.294*
Attitudes to Maths at 9:									
Sometimes like				1.449**	1.467**	1.185**	1.446**	1.467**	1.184**
Never like				2.026***	1.401**	1.023	2.034***	1.398**	1.022
Reading at 9:									
Quintile 2							0.787*	1.145	1.117
Quintile 3							0.791±	1.264*	1.168
Quintile 4							0.798±	1.080	1.151
Quintile 5							0.703*	0.931	1.123
Between primary school variance	0.178**	0.081*	0.003	0.134*	0.077*	0.004	0.129*	0.075*	0.023

*Note: *** p<.001; ** p<.01; * p<.05; ± p<.10.*

Table 3.1b: Multilevel multinomial logistic regression models of the factors associated with liking school at age 13 (contrasted with liking school 'very much') (continued)

	Model 4			Model 5		
	Not liking/ hating	Liking a bit	Liking quite a bit	Not liking/ hating	Liking a bit	Liking quite a bit
Year group:						
Second year	2.210***	1.795**	1.370**	2.188**	1.859**	1.402**
Transition difficulties (centred)	1.174**	1.071*	1.033*	1.160**	1.064*	1.028*
Nature of interaction with teachers (at 13):						
Positive interaction (centred)				0.182***	0.298***	0.523***
Negative interaction (centred)				1.686***	1.692***	1.336***
Between primary school variance	0.102*	0.060*	0.007	0.039	0.030±	0.012

Note: *** p<.001; ** p<.01; * p<.05; ± p<.10.

Note: These models control for all of the background and school factors included in Tables 3.1a.

Table 3.1c: Multilevel multinomial logistic regression models of the association between attitudes to school subjects and attitudes to school at age 13

	Subject difficulty			Subject interest		
	Not liking/ hating	Liking a bit	Liking quite a bit	Not liking/ hating	Liking a bit	Liking quite a bit
English:						
Difficult	1.702**	1.068	1.201			
Not difficult	0.822*	0.974*	1.024			
Maths:						
Difficult	2.447**	1.490*	1.062			
Not difficult	0.981	1.004	1.008			
Irish:						
Difficult	2.664***	1.480**	1.276**			
Not difficult	0.890	0.793*	0.829*			
Science:						
Difficult	1.652**	1.284*	0.942			
Not difficult	0.991	0.942	0.804*			

	Subject difficulty			Subject interest		
	Not liking/ hating	Liking a bit	Liking quite a bit	Not liking/ hating	Liking a bit	Liking quite a bit
English:						
Interesting				0.571**	0.625**	0.839*
Not interesting				1.002	0.945	0.914
Maths:						
Interesting				0.596**	0.580**	0.664**
Not interesting				2.230***	1.409**	0.967
Irish:						
Interesting				0.770*	0.631**	0.788*
Not interesting				2.018**	1.328*	1.207
Science:						
Interesting				0.701**	0.705**	0.867*
Not interesting				1.361*	0.919	0.919
Between primary school variance	0.000	0.019	0.020	0.038	0.029	0.011

*Note: *** $p<.001$; ** $p<.01$; * $p<.05$; ± $p<.10$.*

Note: These models control for all of the background and school factors included in Tables 3.1a and 3.1b.

Analyses so far have shown that attitudes to school at age nine are predictive of attitudes four years later. However, these analyses do not reveal the extent to which individuals can become more positive or more negative about school over this time-period. Information from the two survey waves was used to distinguish between those who had fairly stable attitudes, those who had increasingly positive attitudes and those who had increasingly negative attitudes. The majority (61%) of young people had stable attitudes; that is, engagement at primary school was associated with later engagement within junior cycle. A fifth of young people (21%) had more positive perceptions of school as they grew older, while 18 per cent reported more negative attitudes than they had previously.

Further models were derived to identify the groups that experienced a decline in attitudes (disengagement) or an improvement in attitudes (enhanced engagement) relative to those whose attitudes remained broadly stable (see Appendix Table A3.1). In terms of background factors, higher levels of parental education were associated with less disengagement and enhanced engagement; young people with graduate mothers were 1.2 times more likely than those whose mothers had Junior Certificate-level education to become more engaged over the four-year period. Being in the highest two quintiles of reading scores at age nine was also associated with less disengagement. In contrast, those from one-parent households were at greater risk of increased disengagement (by a factor of 1.36 compared with two-parent families) over time, other factors being equal. Gender differences were largely stable, though there was a slight tendency for girls to become increasingly positive about school. Differences by SEN status were stable, so more negative attitudes to school found at age 13 reflected more negative attitudes at primary level.

Students in second year were only two-thirds as likely as those in first year to have improved attitudes to school between nine and 13. Experiencing difficulties settling into second-level education was linked to greater disengagement from school, but the difference was small. The quality of teacher-student interaction at age 13 was strongly associated with trends in engagement. Positive interaction was significantly related to less disengagement and enhanced engagement; thus, a standard-deviation increase in positive interaction was associated with being 1.5 times more likely to be increasingly engaged in school. Students who experienced more frequent negative interaction with their teachers were more negative about school than they had been four years previously. Difficulty with Maths, Irish and Science was associated with greater disengagement. The largest effect size was for Maths; students finding Maths difficult were 1.5 times more likely to become less engaged than those who found Maths 'ok'. In contrast, perceived difficulty with English did not have any relationship with trends in engagement. This may reflect the fact that a large proportion of young people described English as 'not difficult'. Finding English, Irish and Science interesting was associated with less disengagement, while enhanced engagement was apparent among those who found English and Maths interesting.

Analyses in this section suggest that attitudes to school subjects can be related to overall attitudes to school. The following section explores the factors underlying this subject engagement and assesses the extent to which attitudes to some subjects is established at primary-school level.

3.3 ATTITUDES TO SCHOOL SUBJECTS AMONG 13-YEAR-OLDS

This section focuses on student attitudes to English, Maths and Irish, as information was collected at Wave 1 on attitudes to these subjects at primary level, enabling us to look at changes over time in subject engagement. Figure 3.4 shows that 13-year-olds did not generally describe these subjects as difficult, but a significant minority (26%) found Maths difficult. English was the most likely to be described as 'not difficult', with over half of the cohort doing so. Of these three subjects, young people found English the most interesting and Irish the least interesting. A significant group (38%) of young people described Irish as 'not interesting' and around a fifth expressed their lack of interest in Maths.

Figure 3.4: Attitudes to English, Maths and Irish (perceived difficulty and interest) among 13-year-olds
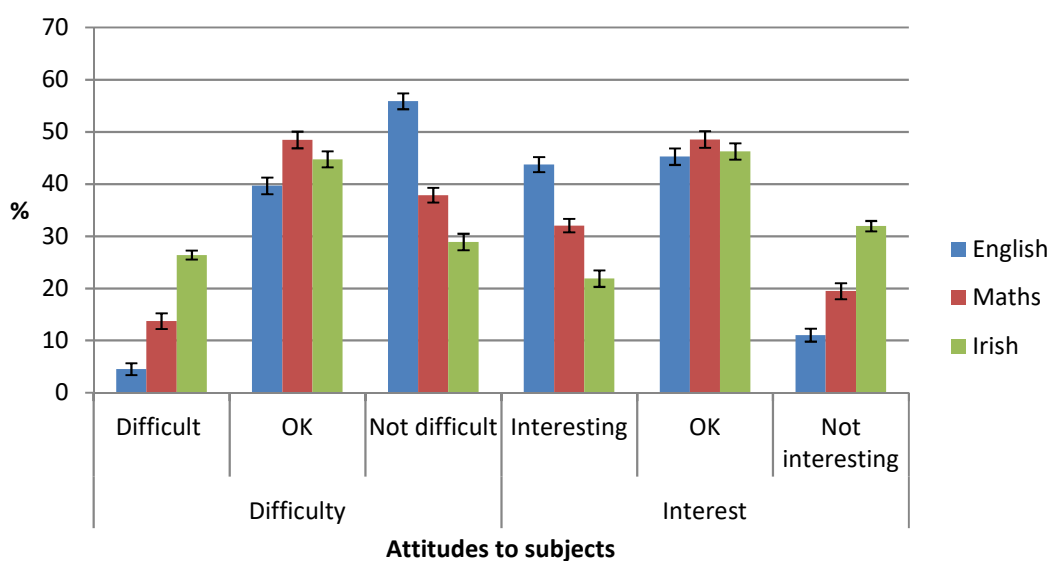
What factors were associated with attitudes to school subjects at the age of 13? Primary-school experiences can influence later attitudes in three ways. First, being more engaged at primary level may foster more positive attitudes to school overall (see above) and to school subjects. Secondly, finding subjects more engaging at primary level may foster continued engagement with these subjects. Thirdly, primary school provides the foundational skills in literacy and numeracy that may be key to later subject engagement. In addition, the experience of settling into second-level education may have an influence on engagement with academic subjects over and above the influence of earlier experiences.

3.3.1 ATTITUDES TO ENGLISH AMONG 13-YEAR-OLDS

Tables 3.2 to 3.4 present a series of multilevel models that look at the extent to which primary and second-level school experiences were associated with interest in and perceived difficulty of English, Maths and Irish among 13-year-olds. As might be expected, young people who were not interested in reading as a school subject were less interested in English at the age of 13 (Table 3.2). Thus, those who only sometimes or never liked reading were only three-quarters as likely to express interest in English at 13 compared with those who always liked reading, while those who never liked reading at nine were 1.7 times more likely to find it 'not interesting' at 13. Interestingly, broader school attitudes at the age of nine had an additional association with being interested in English; those who never or only sometimes liked school were much less likely to report being interested in English at 13. Reading achievement at age nine had a complex relationship with later interest in the subject. Those in the two middle quintiles (three and four) were more interested in English four years later. However, the highest-achieving group were more likely to describe English as 'interesting' or 'not interesting', suggesting more polarised attitudes among this group. It may be that this group of young people were more interested in subjects such as Maths (see below) or did not feel sufficiently challenged by English. Those who had experienced transition difficulties were significantly more likely to describe English as 'not interesting', but the difference was very small in size. Young people who had positive interaction with their second-level teachers were more likely to find English interesting, while those who had experienced negative interaction found the subject less interesting.

Attitudes to reading at the age of nine were also associated with the extent to which young people found the subject difficult four years later. Those who never or only sometimes liked reading were much less likely to describe English as 'not difficult' than their peers. Contrary to the pattern for interest in English, broader school attitudes were not associated with perceived difficulty of English. There was a clear linear relationship between reading achievement at the age of nine and finding the subject 'not difficult' at age 13; those in the highest-achieving group were over twice as likely as the lowest achievers to describe the subject as 'not difficult'. No significant relationship was found between the perceived difficulty of English and having experienced transition difficulties. As with interest in English, the perceived difficulty of the subject was significantly associated with the quality of teacher-student interaction.

Table 3.2: Multilevel multinomial logistic regression models of selected factors associated with perceived difficulty of and interest in English among 13-year-olds (odds ratios)

	Interest in English		Difficulty of English	
	Interesting	Not interesting	Difficult	Not difficult
Attitudes to school at age 9:				
Sometimes like	0.769**	1.108	1.323	1.034
Never like (Ref: Always like)	0.733**	1.155	1.156	0.954
Attitudes to reading at age 9:				
Sometimes like	0.754**	1.134	1.081	0.664**
Never like (Ref: Always like)	0.780±	1.706**	1.022	0.726*
Reading achievement at 9:				
Quintile 2	1.158	1.080	0.975	1.293*
Quintile 3	1.209*	0.927	0.823	1.645**
Quintile 4	1.281*	1.232	1.039	1.857***
Quintile 5	1.639**	1.537**	0.865	2.223***
Transition difficulties	0.994	1.020*	1.020	0.989
Quality of teacher-student interaction at 13:				
Positive interaction	1.680**	0.711**	0.873	1.324**
Negative interaction	0.832**	1.411**	1.527**	0.921*
Between primary school variance	0.029	0.005	0.328*	0.061*

*Note: *** p<.001; ** p<.01; * p<.05; ± p<.10.*

Note: These models control for background characteristics and year group.

Interest in English did not vary by the primary school attended. However, significant between-school differences were found in the perceived difficulty of English, even taking account of prior reading achievement, suggesting that schools varied in the extent to which they prepared young people for engaging with the second-level curriculum.

In sum, positive attitudes to English at the age of 13 were associated with having better reading skills and more positive experiences of reading at primary level. In addition, the quality of interaction with teachers was significantly related to attitudes to the subject. Those who had experienced positive interaction with their teachers were more likely to find English interesting and less likely to find it difficult, all else being equal. Conversely, those who had negative interaction with teachers were less interested and found the subject more difficult.

3.3.2 ATTITUDES TO MATHS AMONG 13-YEAR-OLDS

As with English, attitudes to Maths at the age of nine were strongly predictive of later attitudes. Those who 'never' or only 'sometimes' liked Maths at primary level had significantly lower interest in Maths four years later than their peers who 'always' liked Maths (Table 3.3). Attitudes to Maths at the two time-points were more closely related than was the case for English. Those who disliked Maths at primary level were also more likely to find Maths difficult after the transition to second-level education. Attitudes to Maths were more closely related to prior achievement in the subject than was the case for English. Those with greater Maths achievement at the age of nine had much greater interest in Maths at the age of 13 and were much more likely to see the subject as 'not difficult'. Thus, it appears that fostering foundational skills in Maths at primary level was crucial to a later positive engagement with the subject.

Young people who experienced difficulties making the transition to second-level education were somewhat more likely to find Maths difficult than their peers, but the differences were small. The quality of interaction with second-level teachers emerged as having a significant relationship with attitudes to Maths. Positive interaction was associated with a greater interest in, and reduced difficulty with, Maths. In contrast, young people who reported being frequently reprimanded by their teachers were less interested in Maths and found it difficult.

Significant differences were found in the proportion who found Maths 'not difficult' by the primary school attended, while there were slight between-school differences in the levels of interest in Maths.

Table 3.3: Multilevel multinomial logistic regression models of selected factors associated with perceived difficulty of and interest in Maths among 13-year-olds (odds ratios)

	Interest in Maths		Difficulty of Maths	
	Interesting	Not interesting	Difficult	Not difficult
Attitudes to school at age 9:				
Sometimes like	0.833*	0.972	0.850±	1.015
Never like (Ref: Always like)	0.875	1.372*	0.233	1.070
Attitudes to Maths at age 9:				
Sometimes like	0.591**	1.323**	1.045	0.557**
Never like (Ref: Always like)	0.534***	2.212***	1.525*	0.501**
Maths achievement at 9:				
Quintile 2	1.411**	1.024	0.702*	1.395**
Quintile 3	1.557**	1.053	0.851	2.090***
Quintile 4	1.737**	1.076	0.783*	2.620***
Quintile 5	2.044***	1.099	0.731*	4.154***
Transition difficulties	0.987±	1.025*	1.039*	0.983
Quality of teacher-student interaction at 13:				
Positive interaction	1.610**	0.705**	0.748**	1.353**
Negative interaction	0.777**	1.547**	1.548**	0.757**
Between primary school variation	0.045±	0.040	0.020	0.069**

Note: *** $p<.001$; ** $p<.01$; * $p<.05$; ± $p<.10$.

Note: These models control for background characteristics and year group.

3.3.3 ATTITUDES TO IRISH AMONG 13-YEAR-OLDS

Liking Irish at the age of nine was strongly predictive of later attitudes to the subject. Those who never or only sometimes liked the subject at nine were less likely to find it interesting and more likely to find it difficult at 13. Attitudes to school at the age of nine were also associated with later attitudes to Irish; those who never liked school were much more likely to find Irish difficult and not interesting. This pattern held even taking account of attitudes to Irish at the age of nine. No measures of achievement in Irish were available for Wave 1 of the study. However, difficulty with (English) reading at age nine was significantly predictive of later difficulties with Irish. Furthermore, those in the highest reading quintile were somewhat more likely to find Irish interesting than their peers.

Young people who experienced difficulties over the transition period were somewhat less likely to find Irish interesting, though the difference was small. As with English and Maths, those who had positive interaction with their teachers were more likely to find Irish interesting and not difficult. On the other hand, negative interaction was associated with greater perceived difficulty and less subject interest.

Significant, and relatively large, variation was found in the perceived difficulty of Irish by the primary school attended but, as with the other subjects, there was little between-school variation in perceived interest.

Table 3.4: Multilevel multinomial logistic regression models of selected factors influencing perceived difficulty of and interest in Irish among 13-year-olds (odds ratios)

	Interest in Irish		Difficulty of Irish	
	Interesting	Not interesting	Difficult	Not difficult
Attitudes to school at age 9:				
Sometimes like	0.913	1.153±	1.090	1.123
Never like (Ref: Always like)	0.874	1.602*	1.323*	1.279
Attitudes to Irish at age 9:				
Sometimes like	0.681***	1.237**	1.342**	0.674**
Never like (Ref: Always like)	0.635***	1.756***	1.815**	0.552**
Reading achievement at 9:				
Quintile 2	0.991	0.943	0.676*	1.155
Quintile 3	1.121	0.927	0.624*	1.350**
Quintile 4	1.146	1.150	0.720*	1.603**
Quintile 5	1.269*	1.152	0.623*	1.941**
Transition difficulties	0.972*	1.013±	1.022*	0.984*
Quality of teacher-student interaction:				
Positive interaction	1.627**	0.687**	0.807**	1.455**
Negative interaction	0.878*	1.480***	1.543**	0.845**
Between primary school variation	0.039	0.029	0.111**	0.337***

Note: *** p<.001; ** p<.01; * p<.05; ± p<.10.

Note: These models control for background characteristics and year group.

The analyses presented in this section have focused on the perceived difficulty of specific subjects. In the following section, the factors associated with overall academic self-image – that is, how young people regarded themselves as learners – are explored.

3.4 ACADEMIC SELF-IMAGE AMONG 13-YEAR-OLDS

The Piers-Harris intellectual and school status subscale was used as an overall measure of academic self-image. It can be seen as reflecting general rather than specific academic self-image since it relates to seeing oneself as good at school in general ('I am good in my schoolwork', 'I am smart') rather than in particular subject domains. Since the scale was administered to young people at the two waves, it can be used to assess the extent to which academic self-image changed over the transition to second-level education. Among the sample, the average score at the age of 13 was 11.9 (out of a maximum of 16), with a standard deviation of 3.2. Figure 3.5 shows average levels of academic self-image at age 13 by selected background factors. Significant gender differences were evident at age 13, with boys having a more positive view of their own abilities than girls. Young people from more advantaged families (those with professional/managerial occupations or degree-level qualifications) had higher levels of academic self-image. Interestingly, young people from immigrant groups had a more positive view of their own abilities than their Irish peers, though this may reflect other background factors, an issue that is explored further below. A very significant gap, equating to around half a standard deviation, was found between those with a special educational need and their peers, with much less self-confidence in themselves as learners found among those with a SEN.

Figure 3.5: Piers-Harris measure of self-reported intellectual status at age 13 by gender, social class, mother's education, migrant status and having a special educational need (SEN)
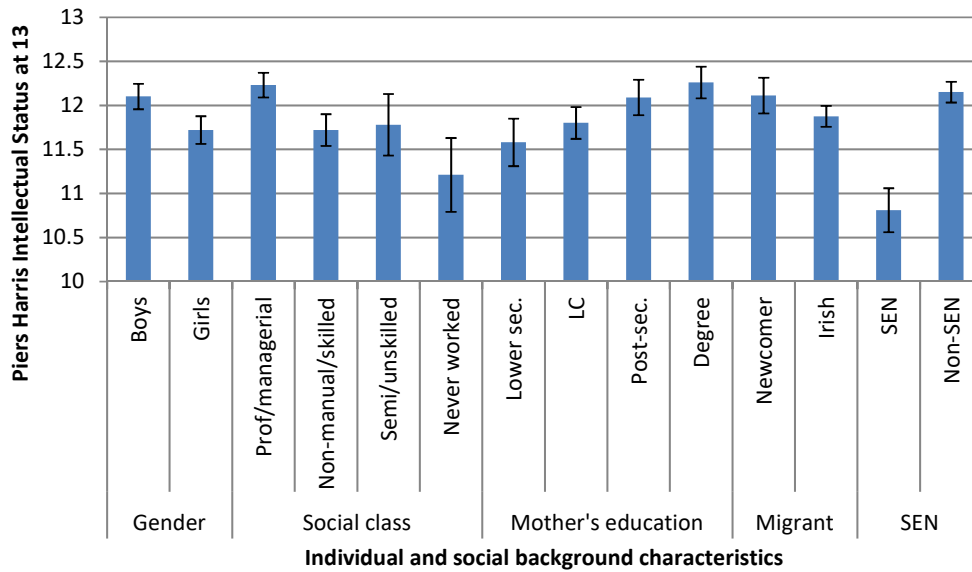
Figure 3.6 shows the extent to which young people's views of their own abilities changed over the period between nine and 13 years of age. Across the whole sample of young people, there was a significant decline in academic self-image over the transition to second-level education as they adjusted to a new and more demanding educational setting. This decline was, however, much greater for some groups than others. Girls had a much greater decline in self-image than boys, with a reversal of the narrow gender gap in favour of girls at the age of nine. Less advantaged groups of young people – those from economically inactive households and those with less-educated mothers – experienced a much greater decline than their more advantaged peers. Young people with special educational needs had a more negative view of their own abilities at the age of nine. Over the four years subsequently, the gap between those with SEN and their peers actually widened. Interestingly, immigrant students experienced less of a decline in self-image than their Irish-born peers. This may reflect greater confidence as young people's English-language competency improved and they became more familiar with the educational system[16]. The remainder of this section presents analyses of the factors associated with levels of and changes in academic self-image.

Figure 3.6: Change in Piers-Harris intellectual status scores between the ages of 9 and 13 years by gender, social class, mother's education, migrant status and having a SEN

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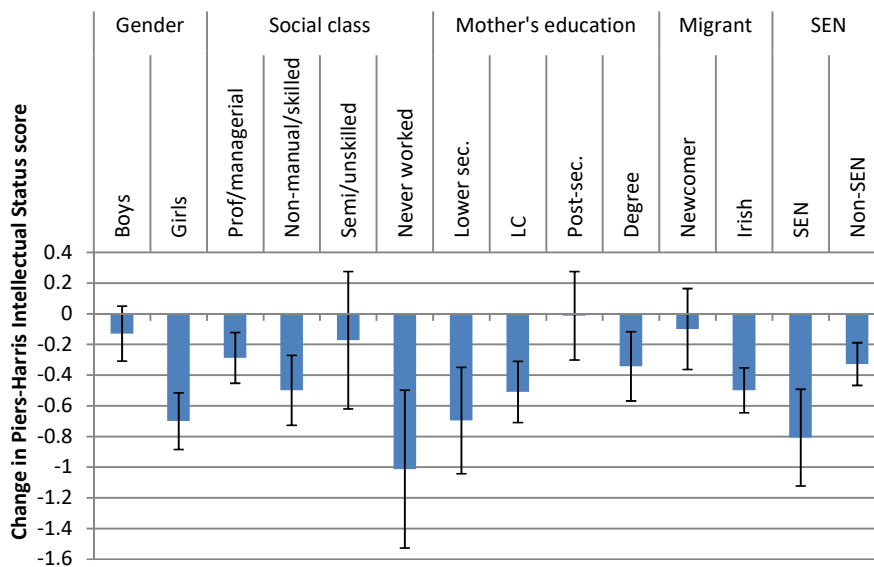
[16]   It should be noted that the sample at age 13 does not include very recent arrivals, that is, those who immigrated between the ages of nine and 13 (see Chapter One).

Girls were found to have a lower academic self-image than boys, even controlling for a range of other background and educational experience factors (Table 3.5). In fact, the gender gap became even wider when factors relating to school engagement were taken into account. Thus, girls were much more negative about their abilities than might be expected given their more positive attitudes to school. The raw differences in academic self-image across social classes (see Figure 3.4) were largely driven by differential education levels. Thus, young people with graduate mothers had more positive views of their own abilities, largely because of their higher achievement levels at primary level (compare Models 1 and 2, Table 3.5). There was a significant difference by household structure in academic self-image, with lower scores among those from one-parent families. At least some of this difference reflected variation in interaction with teachers and the prevalence of transition difficulties. Teenagers with special educational needs had more negative assessments of their academic capacity. Interestingly, the size of the difference reduced as other factors were taken into account; most notably, the quality of teacher-student interaction and attitudes to school subjects (especially perceived difficulty). Young people who had experienced conduct difficulties or problems interacting with their peers were slightly less positive about themselves as learners than their peers. Only a very modest amount of the variation between 13-year-olds in their academic self-image was accounted for by gender and social background factors; most differences are in the order of one scale point. However, additional analyses (not shown here) indicate that all of the factors identified as significant in this model are associated with the likelihood of being in the 'very low' or 'low' groups based on the scale cut-offs; this indicates that the differences between groups are substantive.

Table 3.5: Factors associated with academic self-image (Piers-Harris intellectual and school status subscale score) among 13-year-olds

	Model 1	Model 2	Effect size
Background factors			
Constant	12.465	13.206	
Girls	-0.314**	-0.695***	0.29
Social class:			
Professional/managerial	0.041	-0.161	
Non-manual/skilled manual	-0.300*	-0.248*	0.10
Economically inactive (Ref.: Semi/unskilled manual)	-0.250	-0.300*	0.13
Mother's education:			
Leaving Certificate	0.135	-0.193	
Post-secondary	0.252±	-0.100	
Degree (Ref.: Lower secondary or less)	0.350*	-0.184	
One-parent household	-0.844***	-0.311***	0.13
Immigrant	0.072	0.166*	0.07
Has a special educational need	-1.005***	-0.145*	0.06
Physical illness at age 9	-0.001	-0.079	
SDQ conduct difficulties	-0.109*	0.030	
SDQ peer problems	-0.088*	-0.085*	0.04
Academic self-image at age 9 (centred on mean)		0.143***	0.06
Primary school attitudes			
Attitude to school at 9:			
Sometimes like it		-0.143*	0.06
Never like it		-0.083	
Attitude to teacher at 9:			
Sometimes like		0.006	
Never like (Ref: Always like)		-0.397**	0.17
Attitude to reading at 9:			
Sometimes like it		-0.129*	0.05
Never like it		-0.379*	0.16
(Ref.: Always like it)		-0.058	
Attitude to Maths at 9:			
Sometimes like it		-0.058	

	Model 1	Model 2	Effect size
Never like it (Ref.: Always like it)		-0.284*	0.12
Prior achievement			
Reading achievement at 9:			
Quintile 2		-0.003	
Quintile 3		0.117	
Quintile 4		0.115	
Quintile 5		0.160	
Maths achievement at age 9:			
Quintile 2		0.134	
Quintile 3		0.178±	0.08
Quintile 4		0.234*	0.10
Quintile 5		0.174	
Second-level experiences			
Second year		-0.199**	0.08
Transition difficulties (centred)		-0.088**	0.04
Positive interaction with teachers (centred)		1.183***	0.50
Negative interaction with teachers (centred)		-1.019***	0.43
Subject engagement (Ref.: OK)			
Perceived difficulty of English:			
Difficult		-0.692***	0.29
Not difficult		0.262**	0.11
Perceived difficulty of Maths:			
Difficult		-0.899***	0.38
Not difficult		0.124*	0.05
Perceived difficulty of Irish:			
Difficult		-0.751**	0.32
Not difficult		0.179**	0.08
Perceived difficulty of Science:			
Difficult		-0.588**	0.25
Not difficult		-0.039	
Interest in English:			
Interesting		0.219*	0.09
Not interesting		-0.469**	0.20
Interest in Maths:			
Interesting		0.069	
Not interesting		-0.484**	0.20
Interest in Irish:			
Interesting		0.070	
Not interesting		-0.460**	0.19
Interest in Science:			
Interesting		0.143*	0.06
Not interesting		-0.539**	0.23
Variance:			
Between primary schools	0.125*	0.070*	
Between young people	8.418***	6.367***	
% variance explained:			
School level	33.3	76.9	
Individual level	3.7	39.4	

Note: *** $p<.001$; ** $p<.01$; * $p<.05$; ± $p<.10$.

Academic self-image at age nine was significantly associated with self-image at 13, other factors being equal. At the same time, the effect size was comparatively small, suggesting a good deal of fluidity in self-image over time (an issue explored in greater detail below). Those who only 'sometimes' liked school at nine were less positive about themselves as learners at 13; the association with attitudes to teacher was stronger, with those who 'never' liked their teachers having poorer views of their own academic capacity. Young people who never liked reading and Maths at the age of nine also had a more negative academic self-image at the age of 13.

The extent to which academic self-image varies by ability/IQ and prior achievement has been found to be modest in previous research (Piers and Harris, 1964); self-evaluations have been found to be more heavily influenced by the relative standing of the student vis-à-vis their peers (Rogers et al., 1978; Marsh, 1987). In keeping with this perspective, among the **Growing Up in Ireland** sample, academic self-image reflected prior academic achievement but only to a moderate extent, with more positive self-assessment among those who had higher reading and Maths test scores at the age of nine. The effects of prior reading scores were largely mediated by attitudes to school subjects at the age of 13. However, Maths achievement continued to be significantly associated with academic self-image, even when attitudes to Maths and other factors were taken into account.

Experiences over the transition to second-level education were found to play a role in shaping academic self-image. Thus, young people who had difficulties settling into second-level education became less confident about their own abilities, although the size of this effect was very small. Second-year students had more negative views of their capacity to cope with schoolwork than first-years, reflecting increasing demands in relation to schoolwork. The quality of teacher-student interaction was associated with self-image and had the largest effect sizes; students who had experienced more positive feedback from teachers felt better about their academic capacity, while those who had been frequently reprimanded by teachers had much more negative views of their capacities. This is consistent with previous meta-analyses, which indicate a strong relationship between teacher feedback and self-concept as well as achievement (see, for example, Hattie, 2008). Not surprisingly, finding school subjects (Irish, English, Maths and Science) difficult was associated with academic self-image, with perceived difficulty in Maths having a somewhat stronger association than the other subjects. Describing these subjects as 'not interesting' was associated with lower academic self-image, which may indicate disengagement among students who were struggling with their schoolwork. Those who found English interesting tended to have a more positive academic self-image than other young people.

Overall, three-quarters of the variation between primary schools and 39 per cent of the variation between 13-year-olds in academic self-image was explained by background, prior self-image, primary-school attitudes, prior achievement, and second-level experiences. Significant, but minor, variation remained between primary schools attended when all of these factors were taken into account.

Additional analyses (not shown here) were conducted to explore whether the relationship between these factors and academic self-image varied by social background and gender. For almost all factors, the relationship was similar across social groups as measured by maternal education. However, the association between negative interaction with teachers and poorer self-image was much stronger for those from households with secondary education only. Thus, it appears that the cultural and educational resources in more educated households may serve as a protective factor in responding to teacher criticism and reprimand. The relationship between teacher-student interaction and academic self-image also varied significantly by gender. Both boys and girls had a more positive self-image when they experienced frequent positive interaction with their teachers, but the difference was greater for girls (Figure 3.7). Similarly, the relationship between negative interaction with teachers and poor self-image was stronger for girls than boys. Taken together with the lower academic self-image among girls than boys, this means that there was a greater gender gap in self-image where students experienced less frequent positive interaction and more frequent negative interaction with teachers.

Figure 3.7: Predicted academic self-image, showing the extent to which the relationship between teacher-student interaction and academic self-image varied by gender
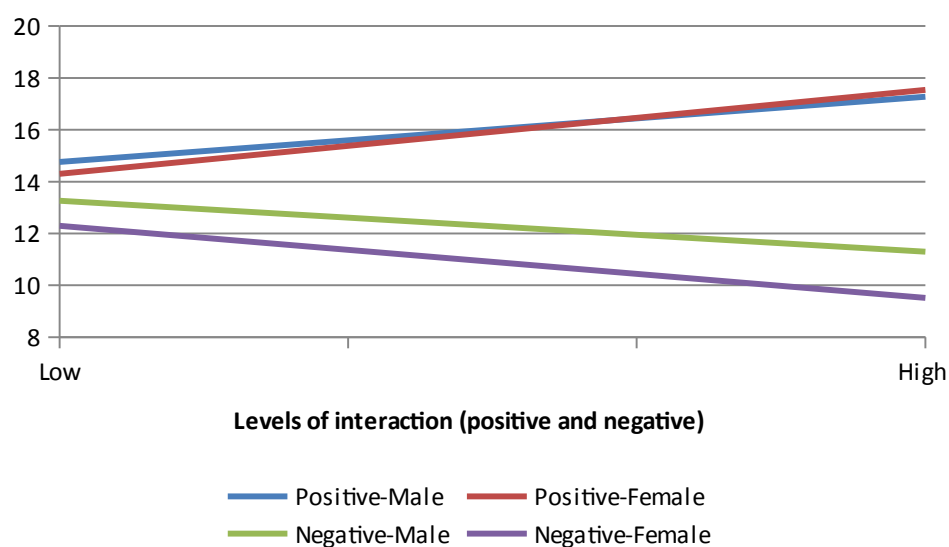
Note: This figure uses the coefficients presented in Table 3.5 derived for the base category (male, working-class, low education, two parents, first year, no physical illness), those with middle quintile reading and Maths test scores, those with average SDQ scores, those who always liked school and school subjects at nine, and those who found second-level school subjects 'ok'.

Figure 3.6 highlighted the average decline in academic self-image between nine and 13 years of age. A better indication of substantive change at the individual level was achieved by looking at whether young people changed between the five categories of perceived intellectual status as defined by Piers and Herzberg (2002); thus, moving from 'average' to 'low' would be interpreted as a decline in self-image, while moving from 'very low' to 'above average' would be an improvement. Using this approach, 42 per cent of the group were found to have a relatively stable self-image over the period, while 31 per cent became more positive about their capacities and 27 per cent became more negative. Girls were less likely than boys to have a more positive self-image and more likely to report a decline in their confidence as learners. Differences in the patterns of change by social class or maternal education were not marked (Appendix Table A3.2). Young people from one-parent families were slightly more likely to experience a decline in self-image. Immigrant young people were less likely than their Irish peers to experience a decline in academic self-image, while those with a special educational need were less likely to experience an improvement in their self-image. Having a physical illness, conduct difficulties or peer problems at the age of nine had no significant relationship with changes in academic self-image.

Table 3.6: Multilevel model of the second-level factors associated with the change in academic self-image between nine and 13 years of age (coefficients)

	Increased	Declined
Second year	1.013	1.079
Transition difficulties	0.979*	1.004
Positive interaction with teachers	1.257**	0.728**
Negative interaction with teachers	0.664**	1.242**

*Note: *** p<.001; ** p<.01; * p<.05; ± p<.10.*

This model controls for the other factors outlined in Appendix Table A3.2.

Further analyses were conducted on the extent to which second-level experiences were associated with an increase or decline in self-image (Table 3.6). Transition difficulties were associated with being less likely to improve in self-image, but the difference was very small. Strong relationships were evident with the nature of teacher-student interaction. The academic self-image of those with more positive interaction was more likely to increase, and less likely to decline. The opposite was the case for those who experienced more negative interaction with teachers.

3.5 ATTENDANCE

The chapter so far has looked at aspects of young people's attitudes to school. In this section, the analysis focuses on a different measure of engagement: the number of days the young person had been absent from school in the last year, as reported by the Primary Caregiver. School attendance reflects a number of factors, especially illness, but previous research indicates that it is an important indicator of student (and familial) engagement with school (see, for example, Reid, 2013). Figure 3.8 shows that the most common pattern at both time-points was for the young person to be absent from school for one to three days. Only a minority – around a tenth – of young people had more prolonged absences, in the order of 10 days per year. There was a slight reduction in the overall level of absence over the four-year period.

Figure 3.8: Number of days young person was absent from school in last year, at 9 and 13 years of age
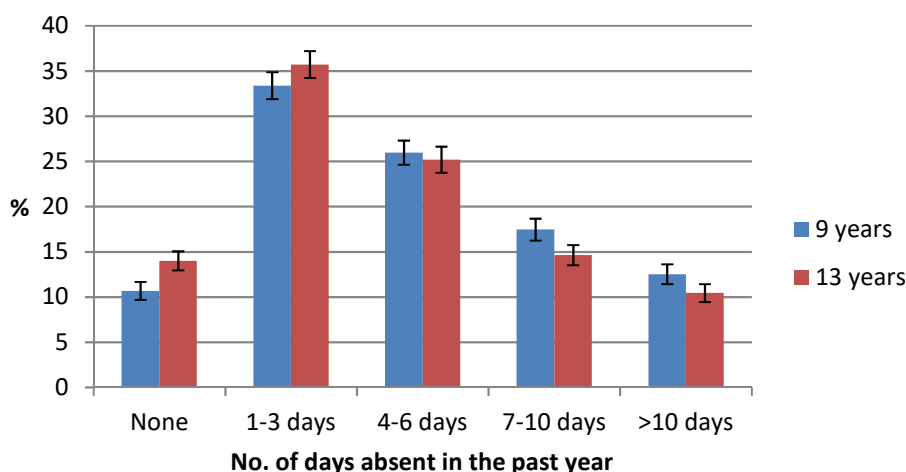
Figure 3.9 illustrates the social differentiation found in school absenteeism. Prolonged periods of absence were more common for those from working-class families (semi/unskilled manual and economically inactive groups). Similarly, absenteeism levels were higher among families with the lowest level of maternal education and the lowest income levels. Furthermore, absenteeism was more prevalent among those from one-parent households.

Figure 3.9: Proportion absent for 11 days or more among 13-year-olds by social class, household income quintile, mother's education and household type
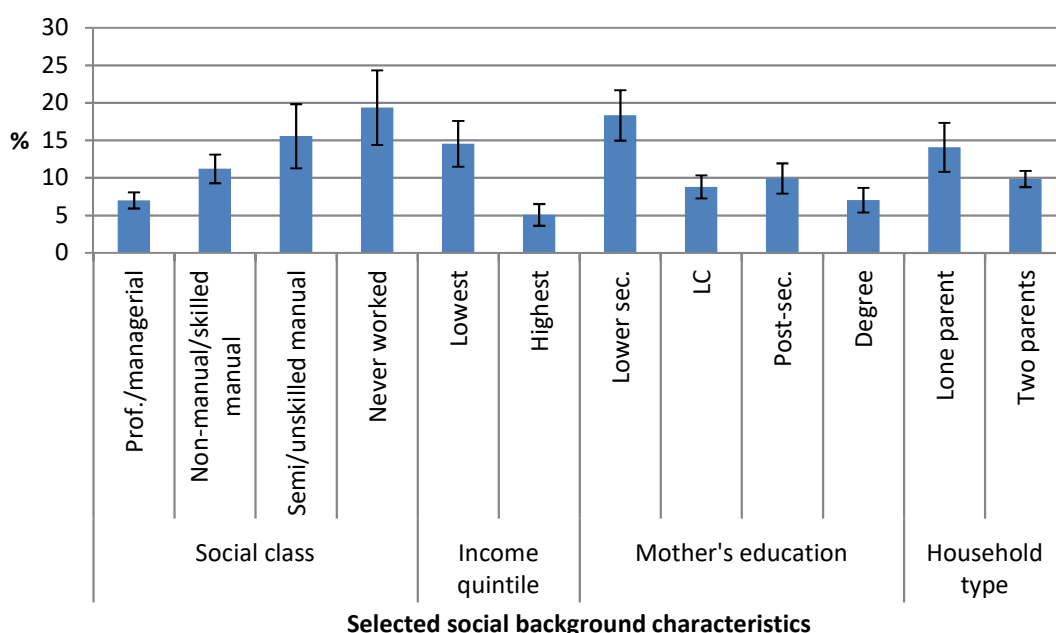
Multilevel models were used to look at the factors associated with absenteeism levels at age 13. In these models, those with 1-3 days, 4-6 days, and 7 days or more were compared to those with full school attendance. There were no significant differences by gender in attendance levels at age 13, other factors being equal (Table 3.7). There were,

however, clear differences by social background. Those from professional/managerial and non-manual/skilled manual households were significantly less likely to fall into the higher absenteeism groups (more than four days), even taking into account differences in prior achievement, attendance and attitudes to school. Parental education had a significant association with attendance over and above the influence of social class. Having higher levels of education, especially having a graduate mother, was associated with less absenteeism, especially for protracted periods. Teenagers from one-parent households had higher rates of school absence, other factors being equal; this group was 1.5 times more likely to fall into the high-absenteeism category than those from two-parent families. There were few systematic differences between immigrant and Irish youth in attendance levels. Young people with a special educational need were found to have higher rates of school absence than their peers, even taking into account their higher absenteeism at primary level. Other socio-emotional difficulties, in terms of conduct or peer problems, were not significantly related to attendance levels. Not surprisingly, those who had an ongoing physical illness or condition were more likely to be absent from school, especially for protracted periods.

Table 3.7: Multilevel multinomial logistic regression models of the factors associated with school absence at age 13 (odds ratios)

	1-3 days	4-6 days	7 days +
Constant	1.113	0.582	0.368
Gender	1.025	0.920	0.945
Class group:			
Professional/managerial	0.928	0.710*	0.606**
Non-manual/skilled	0.874	0.719*	0.693**
Economically inactive	0.836	0.629*	1.006
Mother's education:			
Leaving Certificate	0.997	0.850	0.792*
Post-secondary	0.919	0.723*	0.696**
Degree	0.829*	0.562**	0.519***
One parent	0.994	1.302*	1.548**
Immigrant	0.925*	0.949	1.060
SEN	0.982	1.092*	1.209**
Physical illness at age 9	1.207*	1.346**	1.557***
SDQ conduct difficulties	0.991	0.965	1.012
SDQ peer problems	0.989	0.969	0.960
Absence at age 9:			
1-3 days	2.131***	2.646***	2.965***
4-6 days	2.588***	5.573***	7.352***
7-10 days	3.466***	8.525***	17.832***
11+ days	2.507***	7.807***	22.065***
Attitudes to school at 9:			
Sometimes liked	1.050	1.093	1.204±
Never liked	0.924	1.162	1.349*
Reading achievement at 9:			
Quintile 2	1.145*	1.139*	0.934
Quintile 3	1.385**	1.433**	1.198*
Quintile 4	1.296**	1.289*	0.981
Quintile 5	1.007	1.104	1.061
Second year	1.254*	1.350**	1.354**
Transition difficulties	1.022*	1.060**	1.093***
Positive interaction with teachers	0.956	0.947	0.890*
Negative interaction with teachers	1.285***	1.335***	1.498***
Between primary school variation	0.000	0.000	0.000

*Note: *** p<.001; ** p<.01; * p<.05; ± p<.10.*

Rates of absenteeism at primary level (age nine) were strongly predictive of school absence levels four years later. Those who fell into the high-absenteeism group at age nine were 22.1 times more likely to be in this group four years later

than those who had no school absence. Over and above prior absence, attitudes to school at age nine were somewhat predictive of later absence levels. Those who 'never' liked school at age nine were 1.3 times more likely to have high (7+ days) absence at age 13 than those who 'always' liked school. There was little evidence of a consistent relationship between prior achievement and later absenteeism, though middle-achieving groups appeared to be more likely to have moderate absenteeism levels (1 to 6 days).

Those in second year were more likely to be absent from school than first-year students. Young people who experienced greater transition difficulties were significantly more likely to be absent from school, especially for longer periods. Positive interaction with teachers was not significantly related to school attendance, but was somewhat related to fewer prolonged spells of absenteeism. However, those who had more frequent negative interaction with teachers were more likely to be absent from school, especially for seven or more days. Rates of attendance at the age of 13 did not vary significantly by the primary school attended.

Table 3.7 shows a strong relationship between absenteeism levels at the age of nine and levels four years later. However, comparing attendance at the two time-points gives further insights into the extent of change among individuals; from this perspective, increasing absence could mean moving from having '4-6 days absence' at nine to '11+ days' at 13, for example, while stable attendance would mean having '4-6 days' absence at both nine and 13. There was a good deal more change in absence rates between nine and 13 years of age than was the case for attitudes to school. A third of young people had relatively stable rates, 39 per cent had increased attendance (decreased absence) while 29 per cent had increased absences. Young people from professional/managerial and non-manual/skilled manual were less likely to have increased absences, meaning that working-class teenagers and those from non-employed households had greater levels of absence than at primary level (Appendix Table A3.3). Change in, as opposed to level of, school attendance did not vary by parental education. Young people from one-parent households were more likely to have increased absence over the four-year period. Immigrant youth were slightly more likely to have improved school attendance than Irish teenagers, though the difference was very small. Young people with special educational needs had higher rates of school absence (see above) and their rates of attendance were also more likely to have disimproved over time. Interestingly, those with an ongoing physical illness were more likely to have improved attendance, which may reflect a change in their health status over time. There were few consistent differences in terms of reading achievement. The direction of change did not differ significantly by year group or the nature of teacher-student interaction. Those who experienced greater transition difficulties were slightly more likely to have decreased attendance rates, but this difference was very small.

3.6 SUMMARY

This chapter has explored a range of background and school factors associated with young people's school engagement at 13 years of age, using a number of measures that encompass attitudes to school and school subjects, academic self-image and absence from school.

As at the age of nine, young people were broadly positive about school at the age of 13. Young people from highly educated households and those with higher levels of prior achievement were more positive about school. Young people with a special educational need were more negative about school than their peers, all else being equal. Engagement with school at primary level was found to be predictive of attitudes four years later. However, a fifth of young people improved their perceptions of school over time, while more than one in six became more disengaged with school. The quality of interaction with teachers was strongly associated with attitudes to school; young people who had been frequently reprimanded by their teachers had much more negative views of school, while those who had been given positive feedback were more positive about school. The perceived difficulty of second-level subjects, especially Maths, was associated with increased disengagement over the transition.

In response to the greater demands of second-level schooling, young people tended to become more negative about their ability to cope with schoolwork over the transition process. This was especially evident for girls, those from working-class and less-educated households, and for those with a special educational need. As with attitudes to school, academic self-image at age nine was significantly related to self-image at 13. Again, interaction with teachers was significantly related to changes in self-image over the transition period, with an even stronger relationship for girls than boys.

Absenteeism levels at nine years of age were predictive of attendance levels four years later, despite a slight reduction in overall absence rates. Prolonged absence from school was less common among more advantaged families (in terms of social class and maternal education) and more common for one-parent families and those with a special educational need.

Analyses identified significant differences in attitudes to school, academic self-image and perceived subject difficulty depending on the primary school attended. The following chapter examines whether there is significant variation in some of these outcomes by second-level school attended and whether the type of school accounts for any of this variation.

Appendix Table A3.1: Multilevel model of the factors associated with changes in school engagement between 9 and 13 years of age (contrasted with stable engagement)

	More engaged	Less engaged
Constant	0.224	0.292
Female	1.161*	1.01
Class:		
Professional/managerial	1.162	0.829
Non-manual/skilled manual	1.123	0.868
Economically inactive	1.124	0.906
(Ref.: Semi/unskilled manual)		
Mother's education:		
Upper secondary	1.074	0.808*
Post-secondary	1.126	0.821*
Degree or higher	1.224*	0.699*
(Ref.: Lower secondary)		
One parent	0.913	1.361*
Immigrant	0.986	0.935
SEN	1.026	0.885
Physical illness at age 9	1.023	1.066
SDQ conduct difficulties	1.036	1.017
SDQ peer problems	1.003	1.016
Reading:		
Quintile 2	1.177	0.852
Quintile 3	1.110	0.864
Quintile 4	1.021	0.796±
Quintile 5	1.022	0.786*
Second year	0.676***	1.217*
Transition difficulties	0.969*	1.061*
Nature of interaction with teachers:		
Positive interaction	1.590***	0.609***
Negative interaction	0.899*	1.395**
English:		
Difficult	0.870	0.932
Not difficult	1.010	0.875
Maths:		
Difficult	1.107	1.531**
Not difficult	0.989	1.027
Irish:		
Difficult	0.868	1.285**
Not difficult	1.029	1.037
Science:		
Difficult	0.978	1.264*
Not difficult	1.131	1.06
English:		
Interesting	1.132*	0.813*
Not interesting	0.950	1.204*
Maths:		
Interesting	1.305*	0.871
Not interesting	0.937	1.490**
Irish:		
Interesting	1.042	0.787*
Not interesting	0.943	1.189*
Science:		
Interesting	1.006	0.741*
Not interesting	1.035	1.231*

Note: *** p<.001; ** p<.01; * p<.05; ± p<.10.

Appendix Table A3.2: Multilevel model of the factors associated with changes in Piers-Harris intellectual status scores between ages 9 and 13

	Increased	Declined
Constant	1.011	0.555
Girls	0.826*	1.188*
Social class:		
Professional/managerial	0.842	1.064
Non-manual/skilled manual	0.899	1.082
Economically inactive	0.823	1.095
Mother's education:		
Leaving Certificate	0.823*	0.965
Post-secondary	0.910	0.895
Degree	0.827*	0.921
One-parent household	0.912	1.175±
Immigrant	0.958	0.836*
Has a special educational need	0.943*	0.850
Physical illness at age 9	0.921	1.137
SDQ conduct difficulties	1.026	0.987
SDQ peer problems	1.024	0.974

Note: *** p<.001; ** p<.01; * p<.05; ± p<.10.

Appendix Table A3.3: Multilevel models of the factors associated with changes in school absence between 9 and 13 years of age

	Improved attendance	Declining attendance
Constant	1.105	1.181
Gender	1.103±	0.961
Class group:		
Professional/managerial	0.985	0.797*
Non-manual/skilled	0.952	0.767*
Economically inactive	0.876	0.881
Mother's education:		
Leaving Certificate	0.960	0.91
Post-secondary	0.995	0.898
Degree	0.988	0.945
One parent	1.075	1.235*
Immigrant	1.082*	0.962
SEN	1.153	1.188*
Physical illness at age 9	1.174*	0.972
SDQ conduct difficulties	0.969	1.029
SDQ peer problems	1.023	0.973
Attitudes to school at 9:		
Sometimes liked	0.972	0.925
Never liked	1.062	1.095
Reading achievement at 9:		
Quintile 2	1.078	-0.216*
Quintile 3	0.962	-0.117
Quintile 4	0.992	-0.191*
Quintile 5	1.058	-0.148
Second year	0.967	1.115
Transition difficulties	0.986	1.018*
Positive interaction with teachers	1.008	0.955
Negative interaction with teachers	0.965	1.080

Chapter 4
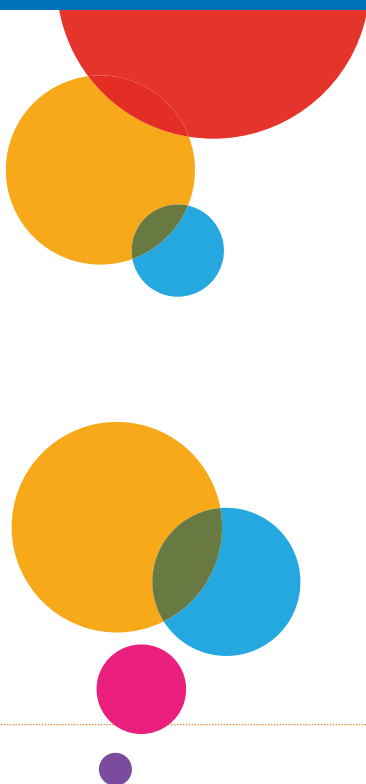
4.1 INTRODUCTION

Chapter Three looked at how primary-school experiences were associated with young people's engagement with second-level education. It also highlighted the ways in which the second-level context can be related to processes of engagement and disengagement. This chapter goes further by seeking to unpack the relative influences of primary and second-level school on young people's experiences and outcomes. In making the transition, young people can move across different school contexts in terms of social mix, gender composition and governance structure. The first section of the chapter looks at the extent to which young people experienced transitions across different school contexts. The second section looks at transitions between specific schools, identifying the relative influence of primary and second-level school on engagement and aptitude test scores.

## 4.2 MOVING BETWEEN DIFFERENT TYPES OF SCHOOL

Among the 13-year-olds in junior cycle at the time of the survey, the vast majority (93%) had attended Catholic denominational primary schools. A minority (24%) had attended single-sex schools, while a small number (7%) had gone to Irish-medium schools (either gaelscoileanna or Gaeltacht schools). Just under a fifth (18%) had attended DEIS[17] (designated disadvantaged) schools, and 4 per cent attended fee-paying schools. There is quite active school choice in the Irish context; around half of young people do not attend their nearest or most accessible second-level school (Hannan et al., 1996; Smyth et al., 2004). The choice of school has important consequences for the kinds of programmes and subjects to which young people have access, the gender and social mix of their peers, and the extent to which they experience the kind of school environment that enhances student outcomes (Smyth, 1999). The different governance structures of second-level schools means that the cohort of young people and their parents in the *Growing Up in Ireland* sample were faced with an array of options in making the transition.

There are three sectors in Irish second-level education. Voluntary secondary schools were mainly established by religious (chiefly Catholic) denominations from the 19th century onwards, and focused on providing an academic curriculum as preparation for university entry or for direct access to white-collar occupations. Secondary schools may be coeducational or single-sex in composition. There are also a small number of fee-paying schools in this sector. Vocational schools, established in the 1930s, were intended to provide vocationally oriented education geared to the needs of local employers, mainly for working-class males. Community/comprehensive schools were introduced in the 1960s in an attempt to bridge the gap between the academic secondary and vocational sectors, offering a broad curriculum to all students (Coolahan, 2000). Currently, while the three sectors differ in management and funding arrangements (Darmody and Smyth, 2013), they operate within a common curriculum and assessment framework. However, the historical origins of the different school sectors mean that they can differ in subject provision and in the social and ability profile of their students (Hannan et al., 1996). Analyses of *Growing Up in Ireland* data (see Williams et al., forthcoming) indicate that such differences in student profile were still evident across the sectors for the study sample. Thirteen-year-olds from less advantaged backgrounds and those with lower prior achievement levels were more likely to attend vocational schools. In contrast, more middle-class young people were over-represented in voluntary secondary schools. Rather than revisit these analyses, here the focus is on other dimensions of variation between schools; chiefly, differences in the gender and social composition and the language medium of the school.

Single-sex schooling in Ireland is more prevalent in second-level education than at primary level. Figure 4.1 looks at the proportion of young people who attended a single-sex second-level school by the type of primary school they attended. The majority (around 60%) of girls and boys who attended single-sex schools continued on to single-sex second-level schools. However, a significant minority moved from a single-sex to a coeducational setting across the transition. Only a minority of young people moved from coeducational to single-sex settings, and this was noticeably more common for girls than boys. Thus, the higher proportion of girls in single-sex second-level education was largely driven by a movement into the sector from those who had received coeducational primary education. Retention in the single-sex sector was much more prevalent in urban than in rural settings (76% remained in single-sex schools compared to 37%), reflecting the way in which the configuration of schools at the local level influenced available choice.

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[17] *The Delivering Equality of Opportunity in Irish Schools (DEIS) scheme targets additional funding towards schools serving more disadvantaged populations; for the period to which these data relate, these schools were selected on the basis of principals' reports of the numbers of students with particular characteristics (including living in social housing, and being from an unemployed family). At primary level, there are three types of schools: DEIS Urban Band 1 (the most disadvantaged), DEIS Urban Band 2 and Rural DEIS. Even controlling for a range of social-background measures, there is a significant achievement gap between urban DEIS and non-DEIS schools (McCoy et al., 2014b). At second-level, the distinction is between DEIS and non-DEIS schools, with no further differentiation made among DEIS schools in terms of their relative disadvantage.*

Figure 4.1: Proportion of young people who moved to single-sex second-level education by their gender and the gender mix of their primary school
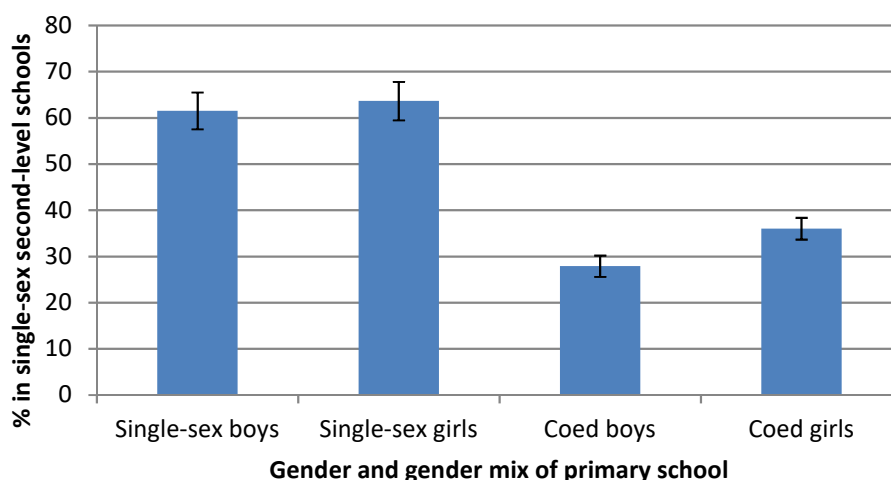
In keeping with previous research (Hannan et al., 1996), young people attending single-sex schools were found to be more advantaged in terms of maternal education, social-class background and household income (Figure 4.2). In addition, young people from one-parent families were less likely to attend single-sex schools than their peers. The groups most likely to attend single-sex schools were girls with graduate mothers and boys and girls from the highest income group (quintile). Within social groups, girls were more likely to attend single-sex schools than boys, although the gender difference was much smaller for those from high-income families.

**Figure 4.2: Proportion attending single-sex second-level schools by mother's education, social class, family type and household income quintile, broken down by gender**
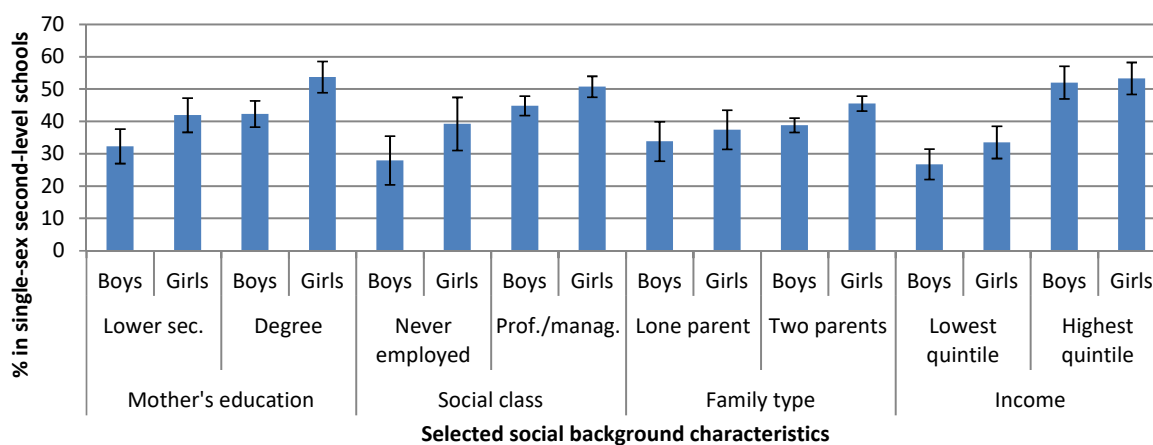
Primary and second-level schools in Ireland differ not only by gender mix but also by social mix. Using DEIS status as a proxy for social mix, the extent to which young people who attended a DEIS primary school were more likely to attend a second-level school with a concentration of disadvantage can be unpacked. Figure 4.3 shows that the majority (59%) of those who attended DEIS Urban Band 1 schools continued on to second-level DEIS schools. The pattern was very different for other types of DEIS school, where two-thirds transferred out of DEIS settings into non-disadvantaged schools. Only a small proportion (12%) transferred from non-disadvantaged primary schools to disadvantaged second-level schools. The group of young people who remained in a DEIS setting over the transition tended to be more disadvantaged in terms of maternal education, social class and household income than those who moved into or out of DEIS schools. At the other end of the social spectrum, the vast majority (91%) of those who started their education in a fee-paying setting continued in a second-level private school; only a small proportion (6%) of those who attended non-private schools at primary level moved to a private second-level school. However, because of the small size of the private sector at primary level, most of those entering private second-level schools came from non-fee-paying primary schools.

Figure 4.3: Proportion of 13-year-olds in a second-level DEIS school by the DEIS status of their primary school
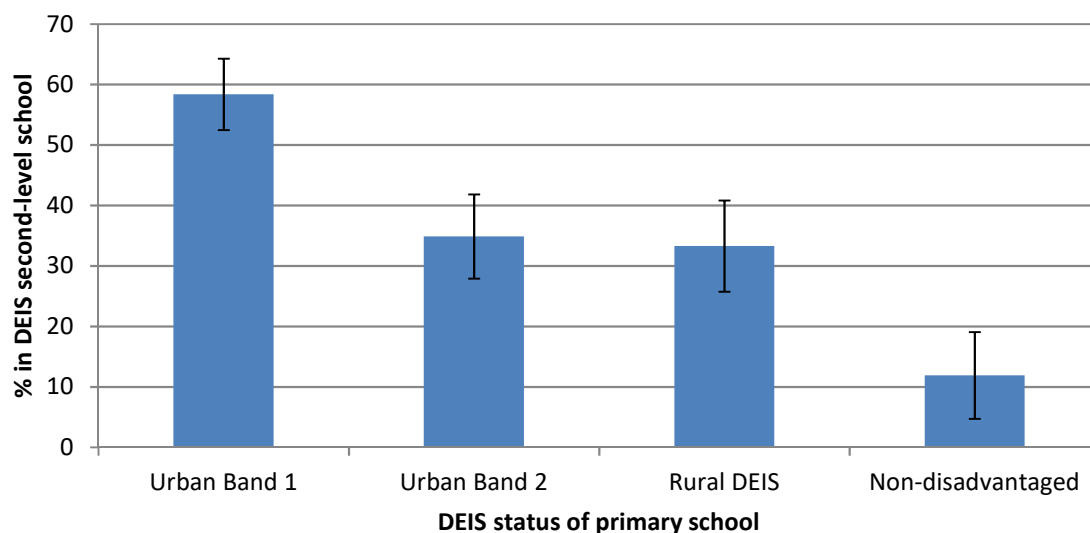
In terms of school language medium, just under half (49%) of young people who had attended an Irish-medium school at primary level (either a gaelscoil or Gaeltacht school) continued on to a second-level Irish-medium school. Just 3 per cent of those who had attended an English-medium school transferred into the Irish-medium sector for their second-level education. However, because of the relative sizes of the two sectors, the latter group made up a considerable presence in gaelcholáistí.

In sum, parental choice of type of primary school was significantly related to the kind of second-level school their children subsequently attended. At the same time, a significant proportion of young people experienced movement between different kinds of school settings in terms of gender, social mix and language medium. Individual schools will also vary inter alia in the approach to subject provision, the type of ability grouping and the quality of teacher-student relations, all of which influence young people's engagement with education. The following section attempts to disentangle the relative influence of primary and second-level schools on young people's experiences and outcomes.

4.3 THE INFLUENCE OF PRIMARY AND SECOND-LEVEL SCHOOLS

Approaches to the study of school effects have largely assumed a hierarchy, with individual students clustered within classes within schools. When the picture is extended to take account of both primary and second-level schools, this simple hierarchy no longer applies. Although some second-level schools have one feeder school or a close relationship with a small set of schools, others draw their students from many schools. Furthermore, students from one primary school may move on to several different second-level schools. The 13-year-old sample was drawn from 877 primary schools, and they attended 623 second-level schools, resulting in a very complex network of transitions between schools.

Only a minority of studies have taken explicit account of the complexity of transitions between schools. In a study of GCSE results in a sample of English schools, Goldstein and Sammons (1997) found greater variation in exam grades depending on the primary school attended than related to the secondary school attended. Thus, the findings suggested strong continuity of primary-school effects until the age of (at least) 16. In a Dutch study, Timmermans et al. (2013) found less variability in upper secondary exam grades by primary school attended but 'very small but significant long-term effects of primary schools' (p. 224). These studies drew on contexts with (at the time) less active school choice than Ireland and did not take account of movement between different types of schools. In the remainder of this section, cross-classified multilevel models are used to disentangle the relative influences of primary and second-level schools on a range of outcomes, net of the gender and social background profile of their students.

As in Chapters Two and Three, the main outcomes of interest are transition difficulties, academic self-image (measured using the Piers-Harris intellectual and school status subscale) and attitudes to school[18]. Because a good deal of the focus in looking at the relative impact of primary and secondary schools has been on test scores, the analyses consider three aptitude tests conducted when young people were aged 13. The Drumcondra Reasoning Test (DRT) - Form C

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[18]   *Because of the complexity of the cross-classified model, attitudes to school are reduced to a binary variable, indicating positive versus negative attitudes to school. This approach allows for a comparison in the proportion of variance explained at the school level.*

was developed by the Educational Research Centre, St Patrick's College, Drumcondra, specifically for the ***Growing Up in Ireland*** study, based on the existing Forms A and B of the Drumcondra Reasoning Test. This is a test of scholastic aptitude based on 20 verbal reasoning and 20 numerical ability items. It reflects the ability of students to reason with words and numbers and is not intended to measure reading or mathematics achievement. Although not an achievement measure, in the Irish context, performance in the verbal and numerical reasoning components of the Differential Aptitude Test has been found to be highly predictive of Junior Certificate (lower secondary) exam grades (Hannan et al., 1994). For each of the DRT tests, the logit score, which takes into account the difficulty and discrimination of each item that is answered correctly, was used in the analysis presented here. For ease of interpretation, the logit score was rescaled to have a mean score of 100 and a standard deviation of 15. In addition, 13-year-olds completed the British Ability Scales Matrices Subtest. The test measures the young person's non-verbal reasoning ability, as well as their ability in visuo-spatial analysis, including perception of shape, relative size and orientation. The score was rescaled to have a mean score of 100 and a standard deviation of 15 in the same way as the DRT scores.

4.3.1 DO PRIMARY SCHOOLS MATTER FOR LATER OUTCOMES?

The first issue is whether taking account of both the primary and second-level schools attended improves the explanation of variation in the assessed outcomes. This can be measured by model fit, using the Deviance Information Criterion (DIC) calculated by the MLwiN package (see Appendix A1). Higher DIC values indicate a model with poorer fit. Table 4.1 compares the model fit for a cross-classified model compared with the fit for two kinds of two-level model: students in primary schools, and students in second-level schools. For each of the six outcomes considered, taking account of both the primary and second-level school attended provides a better model fit (that is, a lower DIC value).

Table 4.1: Comparisons of cross-classified and two-level models (DIC values)

	Cross-classified	Two-level (primary)	Two-level (second-level)
Transition difficulties	40334.43	41041.31	41073.97
Attitudes to school	9426.90	9428.33	9433.11
Academic self-image	37276.16	39295.72	39313.07
Verbal test scores	57886.14	58302.61	58380.90
Numerical test scores	57435.31	57904.09	57953.72
Non-verbal test scores	61598.39	62117.93	62255.54

The second issue is to look at the relative size of the variation by school attended in relation to each of the outcomes. It should be noted that the variance at each level cannot be calculated for attitudes to school because it is a binary rather than a continuous variable. The proportion of variance in the outcomes is assessed for three sets of models. The first is the null model, that is, the model before entering any independent variables; this shows the raw differences between schools without taking account of differences in the profile of student intake. The second set of models takes account of gender, social background, having a special educational need or physical illness, and conduct and peer difficulties at age nine; in other words, it adjusts between-school differences to take account of the profile of students attending these schools. The third set of models adds a further control for reading and Maths achievement test scores at the age of nine. This set of models will give a rather conservative picture of differences between primary schools as achievement will have been influenced by experiences in the primary school before the age of nine and controlling for test scores at nine partials out this influence.

Looking at raw differences (Model 1, Table 4.2), the proportion of variance due to the school level differed across outcomes, being greatest for numerical and non-verbal test scores (with schools explaining 14-15% of the total variance) and least for academic self-image (with schools explaining just 2% of the total variance)[19]. The scale of these between-school differences is on a par with those found in international research, where low levels of variation are found in outcomes other than school achievement (see, for example, Teddlie and Reynolds, 2000). All of the outcomes differed significantly depending on the primary school attended even when the second-level school was taken into account. All of the outcomes, except academic self-image and attitudes to school (binary), varied significantly across second-level schools. For several of the outcomes, the level of variation by primary school was broadly equivalent to that by second-level school; these included transition difficulties and test scores at age 13. Interestingly, attitudes to school at 13 varied more by primary school (with a variance of 0.102 compared to 0.068 for second-level school attended).

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[19]   For example, the figures indicate that, of the total variation in verbal test scores, 9.94% is between primary schools, 5.28% is between second-level schools and 84.78% is between individual young people.

 This initial picture may be somewhat misleading, however, since the interaction of school choice on the part of parents and admission policies on the part of schools means that schools can differ significantly in their student profile. Model 2 (Table 4.2) controls for a range of background and individual student characteristics, including gender, maternal education, social class, family type, immigrant status, having a special educational need (SEN) or physical illness, and conduct and peer difficulties (SDQ subscales) at the age of nine. Taking account of variation in school intake reduced the proportion of variance due to the school level for some of the outcomes, most notably for verbal and numerical test scores as well as for attitudes to school. For most of the outcomes, both primary and second-level school differences remained significant, even taking account of variation in student intake characteristics. One exception was academic self-image, where all of the variation at primary-school level was accounted for by the social background of students. For verbal test scores, the only significant variation was by primary school attended, highlighting the importance of primary-school experiences in providing young people with foundational skills. While both primary and second-level variation remained significant for numerical test scores, the influence of primary school attended was significantly stronger, again highlighting the role of the primary level in fostering foundational skills.

Model 3 (Table 4.2) further controls for reading and Mathematics test scores at nine years of age. Taking account of prior achievement did not have an appreciable effect on the estimates of between-school variation. Even taking account of prior achievement, verbal, numerical and non-verbal test scores as well as transition difficulties were influenced by both the primary and second-level schools attended. In reality, the degree of relative variation at the primary and second-level school level is likely to lie somewhere between the estimates presented in Models 2 and 3. On the one hand, social-background factors may not fully account for prior differences in cognitive development when children start primary school (Hall et al., 2009). On the other hand, controlling for reading and Maths test scores at age nine will reduce the apparent primary-school effect, as children's achievement levels will have been influenced by the school they attended for the previous four to five years. In addition, it should be noted that the small numbers of students in some schools will mean the analyses yield a lower bound estimate of school-level effects, as MLwiN 'shrinks' estimates for schools with only a few students.

Table 4.2: Proportion of variance in selected outcomes (age 13) at the primary school, second-level school and individual levels

	Model 1 (Null model)	Model 2 (Social background, gender, SEN)	Model 3 (Reading and Maths scores at 9)
Transition difficulties:			
Primary school	5.48	4.17	4.29
Second-level school	4.08	3.65	3.50
Individual	90.44	92.18	92.21
Academic self-image (Piers-Harris):			
Primary school	1.61	1.06	1.31
Second-level school	0.75	0.68	0.79
Individual	97.64	98.26	97.80
Verbal test scores:			
Primary school	7.96	3.77	6.03
Second-level school	2.72	0.75	1.68
Individual	89.32	95.49	92.28
Numerical test scores:			
Primary school	9.94	6.37	7.26
Second-level school	5.28	2.38	2.46
Individual	87.78	91.24	90.28
Non-verbal test scores:			
Primary school	6.08	5.05	6.45
Second-level school	8.36	7.35	7.00
Individual	85.56	87.60	86.55

Note: the variance at each level cannot be calculated for attitudes to school because it is a binary variable.

4.3.2 DOES SCHOOL TYPE MAKE A DIFFERENCE?

The analyses so far have highlighted the relative influence of primary and second-level schools on young people's cognitive outcomes and engagement with school. Section 4.2 highlighted the way in which young people often move

between different types of school in the transition period. This subsection explores whether type of school at primary and second-level made a difference to young people's outcomes.

Taking account of gender, social background, immigrant status, having a special educational need, and prior achievement at age nine, Table 4.3 presents estimates of the net impact of school type on young people's outcomes. The main effects of school type related to the concentration of disadvantage in particular schools. Having attended a DEIS Urban Band 1 school (the most deprived school type) at primary level was significantly associated with greater transition difficulties and more negative attitudes to school at age 13. Moving to a designated disadvantaged second-level school had an additional negative relationship with both transition difficulties and attitudes to school. In other words, young people who moved from an Urban Band 1 DEIS primary school to a DEIS second-level school had greater transition difficulties and more negative attitudes to school than similarly disadvantaged students attending non-disadvantaged schools. Perhaps surprisingly, young people who had attended an Urban Band 1 DEIS school had more positive academic self-images than other young people of the same prior achievement levels. This may reflect a reference group effect (Marsh, 1987) whereby these young people were comparing themselves with peers who had relatively low achievement levels. It may also reflect a conscious effort on the part of teachers in DEIS schools to enhance student self-confidence through positive feedback and use of reward systems. For verbal and numerical test scores, having attended an Urban Band 1 DEIS school was associated with much lower scores, with lower numeric scores also found in Urban Band 2 schools. This pattern is consistent with the lower reading and Maths achievement levels found in urban DEIS schools when the cohort was aged nine (see McCoy et al., 2014). Going on to a disadvantaged school at second level was related to a larger gap in verbal and numerical test scores; this cannot be necessarily regarded as a causal effect, and is more likely to reflect the more marginalised nature of young people who remain in DEIS schools across the transition period (see above). For non-verbal test scores, scores were significantly lower among those who had attended an Urban Band 1 DEIS school, but the second-level school attended had no further impact.

Table 4.3: Multilevel models showing the relationship between school characteristics and selected outcomes at age 13

	Transition difficulties	Attitudes to school (binary)	Academic self-image	Verbal test scores	Numeric test scores	Non-verbal test scores
SCHOOL SOCIAL MIX						
Primary:						
Urban Band 1	0.769***	-0.209±	0.393*	-2.795***	-2.456***	-3.517***
Urban Band 2	0.384	0.079	0.206	-1.147	-2.179*	-0.915
Rural DEIS	0.020	0.091	-0.009	-0.202	1.512	-1.949
(Ref.: Non-disadvantaged)						
Second-level:						
DEIS	0.291*	-0.194*	-0.018	-1.217**	-1.375**	-0.206
(Ref.: Non-DEIS)						
SCHOOL GENDER MIX						
Primary:						
Single-sex	0.102	-0.161±	0.027	0.381	-0.228	0.127
Single-sex*girls	-0.046	-0.101	-0.304±	-2.354***	-1.098	-2.146±
Second-level:						
Single-sex	0.107	0.094	0.087	0.055	0.830	-0.494
Single-sex*girls	0.484*	-0.167	0.208	0.603	-1.031	1.330
(Ref.: Coeducational)						
LANGUAGE MEDIUM OF SCHOOL						
Primary:						
Irish medium	-0.104	-0.212±	-0.141	0.095	0.997	0.635
Second-level:						
Irish medium	0.134	0.01	0.095	0.694	0.713	0.532
(Ref.: English medium)						
% BETWEEN-SCHOOL VARIANCE EXPLAINED BY SCHOOL TYPE:						
Primary	30.8	-	15.0	65.0	58.5	19.1
Second-level	32.3	-	59.2	69.2	71.8	26.6

*Note: *** p<.001; ** p<.01; * p<.05; ± p<.10.*

Note: These models control for gender, social class, mother's education, household structure, immigrant status, having a SEN, and reading and Maths test scores at age nine.

There was relatively little variation in outcomes by whether the school(s) attended were single-sex or coeducational. Having attended a single-sex primary school was associated with slightly less positive attitudes to school at age 13, but the difference was only significant at the 10 per cent level. In addition, a slightly greater drop in academic self-image was found for girls who had been in single-sex primary schools. Moving into a second-level single-sex school was associated with greater transition difficulties for girls but not boys. The only significant relationship with cognitive test scores was a negative one – having attended a single-sex primary school for girls, but not for boys. Little significant variation in outcomes was evident by the language medium of the school, but attitudes to school were somewhat more negative than might be expected given the more advantaged student profile among those who had attended Irish-medium primary schools. It should be noted that the numbers of students in this sector was relatively small, so the coefficients may represent an under-estimate.

4.4 SUMMARY

The structures of the schooling system and the active degree of choice open to parents meant that many of the young people in the **Growing Up in Ireland** study moved between schools of different types in terms of gender mix, social mix and language medium. The impact of attending or moving to a single-sex or Irish-medium school was not marked. Stronger effects were found for those who attended urban schools with a high concentration of disadvantaged students. These young people achieved lower verbal and numerical test scores at age 13, even relative to their reading and Maths achievement at the age of nine, experienced greater transition difficulties and held more negative views about school.

The individual primary school attended was found to have an enduring impact on young people's outcomes. In particular, primary schools influenced the development of key skills in verbal reasoning and numeracy, which were crucial to engagement with the second-level curriculum (see Chapter Three). The individual primary and second-level schools attended were associated with the ease of transition into second-level education, a finding that has important implications for policy and practice at the school level.

Chapter 5

CONCLUSIONS
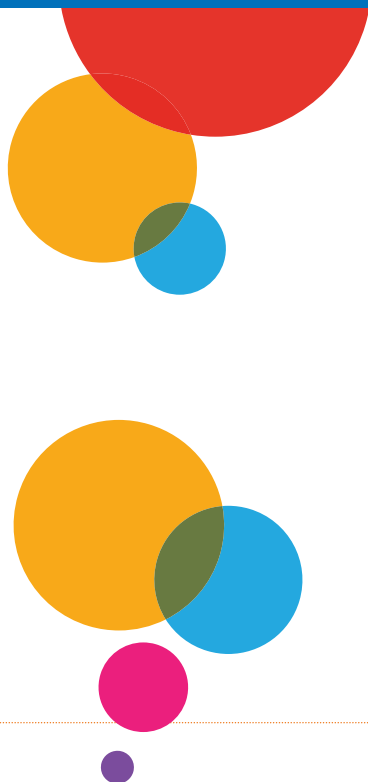
5.1 FOCUS OF THE STUDY

This report has drawn on data from the two waves of the *Growing Up in Ireland* (GUI) Child Cohort to explore the experiences of young people as they made the transition to second-level education, highlighting the relationship between their primary-school experiences and their later school engagement, experiences and outcomes. The report has addressed three main research questions:

1. To what extent were young people's social relationships – with their parents, peers and teachers – associated with their adjustment to second-level education?

2. Was young people's engagement with school at age 13 related to their earlier experiences at primary level?

3. To what extent were the ease of transition and consequent engagement with school associated with experiences of second-level education?

5.2 SOCIAL RELATIONSHIPS AND THE TRANSITION TO SECOND-LEVEL EDUCATION

The transition to second-level education means encountering new subjects and new approaches to teaching, losing old friends and making new ones, and moving from being the oldest in the school to being the youngest. In the Irish context, moving from primary to second-level school involves a change in the type of school for many young people, with moves from coeducational to single-sex settings and between disadvantaged and non-disadvantaged schools. For the *Growing Up in Ireland* cohort, transition difficulties were measured using parental reports of how well their child had settled into the new school setting, which provides a partial, but nonetheless interesting, picture of young people's experiences. Important differences between groups of young people were evident. Girls experienced greater transition difficulties than boys, other factors being equal. Young people from working-class and economically inactive households had greater difficulties adjusting to the new school as did those with less educated mothers. Even controlling for social class and maternal education, young people from one-parent families had greater difficulties making the transition. Immigrant students and young people with a special educational need had greater difficulties settling into second-level education. Young people who had experienced peer difficulties at primary level had greater difficulties adjusting to the new social world of second-level education.

These patterns were mirrored when looking at changes in young people's academic self-image, that is, their confidence in themselves as learners. Between the ages of nine and 13, young people experienced an average decline in their academic self-image (as measured by the Intellectual and School Status subscale of the Piers-Harris Self-Concept instrument). This decline was greatest among girls, those from non-employed households, and those with less educated mothers. The decline in academic self-confidence was much greater among young people with a special educational need compared with their non-SEN peers; it was also greater among those who had poorer socio-emotional wellbeing (in terms of conduct and peer difficulties) at primary level. Interestingly, young people from immigrant families experienced less of a decline in academic self-image than their Irish-born peers. This may reflect the greater confidence that came from improved language competency over their time in Ireland.

This report has yielded new insights into the way in which social relationships are related to the transition to second-level education. The majority (almost three-quarters) of parents became less involved in helping with their children's homework as they became older but the vast majority (88%) remained highly involved in attending parent-teacher meetings. Young people who had received little help from their parents with homework at the age of nine experienced fewer difficulties making the transition, largely because of their independence and greater academic preparedness. Young people had less difficulty making the transition to second-level education when their parents were more formally involved in the school, attending parent-teacher meetings and other school-based events (such as concerts or sports days). However, the frequency of informal discussion between parents and young people emerged as a more crucial factor; greater transition difficulties were evident among those who did not 'talk together' with their parents every day.

Similarly, friendship was found to play an important role in the transition process. As they moved into early adolescence, young people generally kept the same number of close friends, though the proportion with large groups of friends increased. On average, adolescent friendships were characterised by high levels of trust and low levels of alienation. Some students emerged as more socially isolated than others. Immigrant young people reported fewer close friends than their Irish peers, but the quality of their friendship groups was comparable. There were marked differences in friendship patterns between young people with a special educational need and their peers. Young people with SEN were much more likely than others to have no or only one friend, were less likely to trust their friends and more likely

to feel alienated from these friends. Having more close friends was associated with fewer transition difficulties. Over and above the number of close friends, high levels of trust in their friends were related to settling into second-level education, while those who reported greater alienation from their friends experienced more transition difficulties.

Social relations with second-level teachers were also found to play a significant role in easing the transition; these patterns are discussed in section 5.4 below.

5.3 PRIMARY SCHOOL EXPERIENCES AND LATER SCHOOL ENGAGEMENT

Primary schools can influence young people's later engagement with education in a number of ways. First, having a positive experience of primary school and good relations with teachers can enhance children's engagement with school and thus provide a firm foundation for later engagement. Secondly, having a positive experience of school subjects such as Irish and Maths at primary level is likely to influence young people's attitudes to these subjects in the longer term. Thirdly, acquiring key skills in the form of literacy and numeracy provides the bedrock for later engagement with the second-level curriculum.

The analyses presented in this report show that all of these factors came into play in shaping young people's engagement with school at the age of 13. In keeping with previous research (see, for example, Fredericks et al., 2004), a multi-dimensional approach was taken to measuring school engagement, comprising attitudes to school, attitudes to school subjects and attendance levels. Those who had negative attitudes to school at the age of nine were significantly more likely to have negative attitudes to school four years later. Over and above the effects of prior attitudes to school, young people who liked their teacher at the age of nine were more positive about school at the age of 13. Acquiring positive attitudes to reading and Maths at primary level was significantly related to liking school after the transition to second-level education. The skills acquired at primary level also made a difference; the most negative attitudes to school at the age of 13 were found among those in the lowest reading quintile.

Attitudes to specific school subjects, namely, English, Irish and Maths, at age 13 were similarly strongly related to earlier attitudes to these subjects and to skills development. Thus, those who liked a subject at the age of nine were more likely to find the subject interesting and not difficult four years later. English reading skills at the age of nine were significantly predictive of finding English and Irish less difficult in second-level education, while the highest-achieving group (quintile) had much greater interest in these language subjects. The relationship between prior skills and later subject attitudes was even stronger for Maths; higher levels of Maths achievement were markedly related to later perceived difficulty of, and interest in, the subject.

While attendance is shaped by a broad array of factors, especially illness, it has been taken as an important indicator of school engagement in previous research (see, for example, Reid, 2013). Primary-school experiences were found to be less strongly related to absenteeism than to the other dimensions of engagement, though prolonged absence from school at the age of 13 was more prevalent among those who had only sometimes or never liked school when they were nine years of age.

5.4 SECOND-LEVEL EXPERIENCES

The transition to second-level education involves a move from having one classroom teacher to having many subject teachers. Young people were asked about the extent to which they experienced positive interaction (that is, being praised or given positive feedback) and/or negative interaction (in the form of being reprimanded) with their teachers. In keeping with previous research (Hannan et al., 1996; Smyth et al., 2007), girls were more likely to experience positive interaction and less likely to experience negative interaction than boys, other factors being equal. This gender gap was largely, but not entirely, explained by differences in levels of school misbehaviour at 13, pointing to the potential for some boys to experience a negative cycle of teacher reprimand and acting out in response, a cycle that fuelled school disengagement (see Smyth, 2016). High-achieving students had more positive interaction with teachers, while those from one-parent households and those with special educational needs were more likely to experience negative interaction. Having had conduct difficulties at age nine was associated with the nature of interaction with teachers four years later. However, teacher-student interaction was more strongly related to current levels of misbehaviour, suggesting some changes in the nature of student behaviour over the transition period. The frequency of positive interaction with teachers was associated with fewer transition difficulties among young people, while frequent negative interaction was related to transition difficulties among the most disadvantaged groups.

The report has shown the strong relationship between primary-school experiences and later experiences, engagement and outcomes. However, there was also substantial evidence of change over time: some young people became disengaged from school while others became more engaged than previously. Experiences in junior cycle (lower secondary education) were found to make a difference to young people's outcomes, even controlling for primary-school experience. Across the outcomes considered, the quality of day-to-day interaction between teachers and students was found to have the largest effect sizes, which is consistent with the significant impact of teacher feedback and social relations found in existing research (see, for example, Hattie, 2008). Among the *Growing Up in Ireland* sample, those who had more positive interaction with their second-level teachers were significantly more positive about school, while those who had more negative interaction with teachers were markedly more disengaged from school. Negative interaction was also associated with more absence from school, all else being equal. The frequency of positive interaction with teachers was related to enhanced interest in particular subjects, while those who experienced negative interaction were more likely to find second-level subjects difficult. Young people who had received positive feedback from their teachers had a more positive academic self-image, while those who had been frequently reprimanded felt less able to cope academically, even controlling for prior achievement levels. Furthermore, young people who had frequent positive feedback from teachers were less likely to experience a decline in academic self-image over the transition period. The relationship between teacher feedback and academic self-image was even stronger for girls than for boys. Analyses indicated that the quality of interaction with teachers was associated with student outcomes, even taking account of prior socio-emotional difficulties and current school-based misbehaviour.

In addition, experience of the second-level curriculum had a strong relationship with school engagement. Young people who found their school subjects (English, Maths, Irish and Science) difficult at the age of 13 were more likely to dislike or even hate school. Conversely, finding these subjects interesting was associated with less disaffection from school, an effect that was strongest for Maths. In particular, not finding Maths interesting was associated with greater disengagement from school.

A number of commentators have argued that difficulties in making the transition to second-level education reflect developmental changes linked to adolescence rather than the impact of school structures (see, for example, Eccles et al., 1993). However, such studies have rarely been able to disentangle the effects of stage of schooling from those of age. Previous Irish research, the Post-Primary Longitudinal Study, based on a cohort of young people entering second-level education at the same time, indicated greater disengagement and misbehaviour in second year than in first year (Smyth et al., 2007). The nature of this study meant it was not clear whether this pattern reflected students becoming disenchanted as they grew older or whether it related to the structure of junior cycle. The cohort of young people in the *Growing Up in Ireland* study was age-based, with 13-year-olds almost evenly divided between first and second year of second-level education. In keeping with previous research on junior-cycle experiences (see Smyth et al., 2007), second-year students were found to have significantly more negative interaction with teachers than first-year students, all else being equal. As a result of this pattern, second years were more likely to report that they 'hated' or did 'not like' school. In addition, second years had much more negative opinions of their ability to cope with schoolwork. Looking at changes in academic self-image, a more complex picture emerged, with a polarisation among second years in relation to whether their self-image had improved or disimproved. Thus, some students appeared to struggle with their schoolwork in second year while others become increasingly engaged, in keeping with previous research (see Smyth et al., 2007). Disaffection from school among second years was also reflected in their friendship networks. While second-year students did not differ from their first-year counterparts in the number of close friends they had, they had significantly less trust in and felt greater alienation from these friends. Taken together, the two studies – the Post-Primary Longitudinal Study and the *Growing Up in Ireland* study – provide solid evidence of the importance of stage of education in shaping student experiences.

The study findings point to the importance of both primary and second-level experiences in shaping student perspectives and outcomes. Thus, even taking account of the profile of students, the individual primary and second-level school attended shape the nature of the transition and of skill development among young people.

5.5 LIMITATIONS OF THE RESEARCH AND IMPLICATIONS FOR FURTHER RESEARCH

Like all research studies, this report has some limitations. First, the measure of transition difficulties was based on parental reports rather than those of young people, and is therefore likely to have underestimated potential difficulties. Nonetheless, taking account of other measures of the transition experience, such as academic self-image and school engagement, provides a more rounded picture of the transition process in that it incorporates young people's own

perspectives. Secondly, the study focused explicitly on the potential influence of primary-school experiences on young people's experiences, engagement and outcomes in lower secondary education. The richness of the *Growing Up in Ireland* data offers the potential for further detailed analyses of the transition to and engagement with second-level education, incorporating not only social background and primary-school characteristics (as in the current study) but also other factors relating to physical development, temperament, and socio-emotional and behavioural development. Information on neighbourhood factors would allow for a detailed analysis of the relative role of school and neighbourhood in shaping academic experiences and outcomes, an approach never previously adopted in the Irish context.

The report has highlighted differential experiences of the transition to second-level education among two groups of young people rarely considered in existing Irish studies: migrant young people and those with special educational needs. Further research would be merited to unpack the heterogeneous nature of each group, looking at differences by language of origin and time of arrival in Ireland for migrant youth, and at type of need and the degree to which it hampers daily activities for young people with SEN.

The longitudinal nature of the *Growing Up in Ireland* study provides scope to develop the picture further. Further waves of data collection at 17 and 20 years of age will facilitate analysis of the extent to which primary school and early junior-cycle experiences continue to shape outcomes into later adolescence and into the post-school period. The Infant Cohort data could also be used to examine whether early experiences of primary school, particularly the transition into formal education, matter for later school engagement and academic outcomes.

5.6 IMPLICATIONS FOR POLICY

The analyses presented in this report show clearly that engagement in school reflects both primary and second-level school experiences. At primary level, liking school, the teacher and school subjects sets the tone for later engagement with school and schoolwork. Although most children were positive about school at the age of nine, emerging differences were evident by gender and having a special educational need (McCoy et al., 2012). Variation was also evident in attitudes to subjects at the age of nine. Substantial minorities only 'sometimes' liked reading and Maths, and only a fifth of children 'always' liked Irish (McCoy et al., 2012). The evidence therefore points to the importance of providing an engaging primary-school experience for children in order to foster longer-term educational engagement and achievement. It also raises issues to be considered in the review of the primary curriculum currently being conducted by the National Council for Curriculum and Assessment (NCCA). Early experience of Maths emerges as particularly important for later interest and perceived difficulty. Policy concern about poor engagement with and performance in Maths at second-level prompted the introduction of a new Project Maths syllabus, designed to promote problem-solving skills. The findings presented here point to the potential value in also rethinking approaches to Maths teaching at primary level in order to enhance interest and skills. The primary-school experience is all the more important because it provides the foundational skills that young people need to engage with the second-level curriculum. Reading and Mathematics achievement at the age of nine were predictive of longer-term engagement, underlying the importance of the current policy focus on enhancing literacy and numeracy skills at primary level. Given that achievement gaps in terms of social background and school social mix emerge at primary level (McCoy et al., 2014b), providing an engaging curriculum and teaching methodologies for all students is extremely important.

Even taking account of primary-school experiences, the report findings highlight important social-background differences in ease of transition, academic self-image and attitudes to school. Social inequality in educational outcomes reflects broader inequality in the economic, cultural and social resources possessed by families, highlighting the importance of joined-up thinking in providing for disadvantaged families. The DEIS programme, which targets additional resources towards schools with a concentration of disadvantage, has formed the central plank of government policy to counter educational inequality (Smyth et al., 2015). There has been some improvement in skill development and attendance in DEIS schools, but a significant gap in achievement remains. This study provides further evidence of a skills gap between DEIS and non-DEIS schools, as well as differences in attitudes to school and ease of transition to second-level education, highlighting the particular challenges for those who remain in a DEIS setting in relation to their school career. The recent review of DEIS provision conducted by the Department for Education and Skills resulted in the introduction of a new way of identifying schools for targeted supports, based on the neighbourhood deprivation levels of the school population, and highlighted the need for a greater integration in supports for disadvantaged children and young people. However, a broader issue remains as to whether the scale of current funding is sufficient to bridge the gap in resources between DEIS and non-DEIS schools. At the same time, it is worth noting that the majority of students from disadvantaged backgrounds do not attend DEIS schools (Smyth et al., 2015), highlighting the importance of providing

some assistance for disadvantaged groups across all schools; for example, by providing funding for schools on a tapered basis.

The report findings point to issues around the inclusion of young people with special educational needs. While policy has moved towards the mainstreaming of students with SEN, significant differences remain between young people with SEN and their peers in terms of the transition to second-level education, attitudes to school, academic self-image and engagement with school subjects. The findings reinforce the case for providing a curriculum and teaching methods that are engaging for students of all needs and abilities.

The report provides further evidence that the current junior-cycle structure is linked to a dip in student engagement in second year, which reinforces the case for junior-cycle reform. This reform, implemented on a phased basis from the school year 2014/15, represents a sea-change in the nature of Irish second-level education, although, at the time of writing, one of the teacher unions continues to express concerns about the nature of the reform. It involves a shift away from an exam-dominated mode of assessment, less detailed curriculum specifications, fewer subjects to be assessed than currently, a focus on embedding key skills in teaching and learning, and a concern with more innovative approaches to teaching and learning (NCCA, 2011). However, current methods, especially in exam years, are quite teacher-dominated, with less of the active engagement in teamwork and project work that students find engaging (Smyth et al., 2007). Effective curriculum reform will require broadening of the repertoire of teaching and assessment methods used in the classroom, which necessitates a strong emphasis on continuous professional development for teachers and planning support for schools. System reform will not ensure real change unless it is underpinned at the school level.

The study findings point to the critical importance of day-to-day interaction with teachers in facilitating continued engagement with school over the transition to second-level education. Promoting a school climate characterised by positive interaction and mutual respect between teachers and students should therefore represent an important focus of initial and continuous teacher education, and form a strong element of school development planning. Furthermore, reframing school discipline policy away from negative sanction towards positive reinforcement could serve to improve the school climate and thus enhance student wellbeing and learning, especially in working-class schools and among boys (see Smyth, 2016).

In sum, the study findings highlight the cumulative influence of primary and second-level experiences on student engagement, pointing to the value of policy measures that focus on the educational system as a whole and the pathways young people take within and between sectors.

REFERENCES

Anderson, L. W., Jacobs, J., Schramm, S. and Splittherber, F. 2000, 'School Transitions: Beginning of the End or a New Beginning?', *International Journal of Educational Research*, Vol. 33, pp. 325-339.

Armsden, G.C. and Greenberg, M.T. 1987, 'The Inventory of Parent and Peer Attachment', *Journal of Youth and Adolescence*, Vol. 16, No. 5, pp. 427-454.

Banks, J. and McCoy, S. 2011, *A Study on the Prevalence of Special Educational Needs*. Dublin: NCSE.

Berliner, B. A. 1993, *Adolescence, School Transitions and Prevention*. Portland, Oregon: Western Regional Center for Drug-free Schools and Communities.

Byrne, D. and Smyth, E. 2010, *No Way Back? The Dynamics of Early School Leaving*. Dublin: Liffey Press/ESRI.

Byrne, D. and Smyth, E. 2011, *Behind the Scenes? A Study of Parental Involvement in Post-Primary Education*. Dublin: Liffey Press/ESRI.

Coe, R. 2002, *It's the Effect Size, Stupid: What effect size is and why it is important*. Paper presented at the Annual Conference of the British Educational Research Association, University of Exeter, England, 12-14 September 2002.

Cohen, J., McCabe, E., Michelli, N.M. and Pickeral, T. 2009, 'School Climate: Research, Policy, Practice and Teacher Education', *Teachers College Record*, Vol. 111, No. 1, pp. 180-213.

Coolahan, J. 2000, *Irish Education: History and Structure*. Dublin: IPA.

Cosgrove, J., McKeown, C., Travers, J., Lysaght, Z., Ní Bhroin, O. and Archer, P. 2014, *Educational Experiences and Outcomes for Children with Special Educational Needs*. Dublin: National Council for Special Education.

Crockett, L. and Losoff, M. 1984, 'Perceptions of the Peer Group and Friendship in Early Adolescence', *Journal of Early Adolescence*, Vol. 4, No. 2, pp. 155-181.

Crosnoe, R. 2011, *Fitting In, Standing Out: Navigating the Social Challenges of High School to Get an Education*. Cambridge: Cambridge University Press.

Crosnoe, R., Johnson, M.K. and Elder, G.H. 2004, 'Intergenerational Bonding in Schools', *Sociology of Education*, Vol. 77, pp. 60-81.

Darmody, M. and Smyth, E. 2013, *Governance and Funding of Voluntary Secondary Schools in Ireland*. Dublin: ESRI.

Demetriou, H., Goalen, P. and Rudduck, J. 2000, 'Academic Performance, Transfer, Transition and Friendship: Listening to the Student Voice', *International Journal of Educational Research*, Vol. 33, pp. 425-441.

Desforges, C. 2003, *The Impact of Parental Involvement, Parental Support and Family Education on Pupil Achievements and Adjustment: A Literature Review*. Nottingham: Department for Education and Skills.

Dornbusch, S. and Glasgow, K. 1996, 'The structural context of family-school relations', in Booth, A. and Dunn, J. (Eds.). *Family-School Links: How do they affect educational outcomes?* (pp.35-44). Hillsdale, N.J: Lawrence Erlbaum.

Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., Reuman, D. A., Flanagan, C. and MacIver, D. 1993, 'Development During Adolescence. The Impact of Stage-Environment Fit on Young Adolescents' Experiences in Schools and in Families', *American Psychologist*, Vol. 48, No. 2, pp. 90-101.

Eccles, J.S. and Roeser, R.W. 2011, 'Schools as Developmental Contexts During Adolescence', *Journal of Research on Adolescence*, Vol. 21, No. 1, pp. 225-241.

Elliot, K. and Sammon, P. 2004, 'Exploring the use of effect sizes to evaluate the impact of different influences on child outcomes: possibilities and limitations', in I. Schagen and K. Elliot (Eds.), *But what does it mean? The use of effect sizes in educational research*, Slough: NFER.

Erikson, R. 1984, 'Social Class of Men, Women and Families', *Sociology*, Vol. 18, No. 4, pp. 500-514.

Fredericks, J. A., Blumenfeld, P. and Paris, A. H. 2004, 'School Engagement: Potential of the Concept, State of the Evidence', *Review of Educational Research*, Vol. 74, No. 1, pp. 59-109.

Galton, M., Morrison, I. and Pell, T. 2000, 'Transfer and Transition in English Schools: Reviewing the Evidence', *International Journal of Educational Research*, Vol. 33, pp. 341-363.

Giordano, P.C. 2003, 'Relationships in Adolescence', *Annual Review of Sociology*, Vol. 29, pp. 257-281.

Goldstein, H. 2003, *Multilevel statistical models*. London: Wiley.

Goldstein, H. and Sammons, P. 1997, 'The Influence of Secondary and Junior Schools on Sixteen Year Examination Performance: A Cross-Classified Multilevel Analysis', *School Effectiveness and School Improvement*, Vol. 8, No. 2, pp. 219-230.

Gutman, L.M. and Midgley, C. 2000, 'The Role of Protective Factors in Supporting the Academic Achievement of Poor African American Students During the Middle School Transition', *Journal of Youth and Adolescence*, Vol. 29, No. 2, pp. 223-248.

Hall, J., Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I. and Taggart, B. 2009, 'The Role of Pre-School Quality in Promoting Resilience in the Cognitive Development of Young Children', *Oxford Review of Education*, Vol. 35, No. 3, pp. 331-352.

Hallinan, M. 2008, 'Teacher Influences on Students' Attachment to School', *Sociology of Education*, Vol. 81, No. 3, pp. 271-283.

Hannan, D.F., Smyth, E., McCullagh, J., O'Leary, R. and McMahon, D. 1996, *Coeducation and Gender Equality*. Dublin: Oak Tree Press/ESRI.

Hargreaves, L. and Galton, M. 2002, *Transfer from the Primary Classroom: Twenty Years On*. London: RoutledgeFalmer.

Harland, J., Moor, H., Kinder, K. and Ashworth, M. 2002, *Is the Curriculum Working? The Key Stage 3 Phase of the Northern Ireland Curriculum Cohort Study*. Slough: The National Foundation for Educational Research (NFER).

Harris, A. and Goodall, J. 2007, *Engaging Parents in Raising Achievement: Do Parents Know They Matter?* London: Department for Children, Schools and Families.

Hattie, J. (2008). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.

Jackson, C. (2006). *Lads and ladettes: Gender and a fear of failure*. Oxford: Oxford University Press.

Jones, K. 1991, *Multi-Level Models for Geographical Research*. Norwich: University of East Anglia.

Kreft, I. and De Leeuw, J. 1998, *Introducing Multilevel Modeling*. London: Sage.

Lareau, A. 2000, *Home Advantage: Social Class and Parental Intervention in Elementary Education*. Lanham: Rowman & Littlefield.

Lord, S. E., Eccles J.S. and McCarthy, K. A. 1994, 'Surviving the Junior High School Transition. Family Processes and Self-Perceptions as Protective and Risk Factors', *Journal of Early Adolescence*, Vol. 14, No. 2, pp. 162-199.

Lucey, H. and Reay, D. 2000, 'Identities in Transition: Anxiety and Excitement in the Move to Secondary School', *Oxford Review of Education*, Vol. 26, No. 2, pp. 191-205.

Lynch, K. and Lodge, A. 2002, *Equality and Power in Schools*. London, RoutledgeFalmer.

Marsh, H. W. 1987, 'The big-fish-little-pond effect on academic self-concept', *Journal of Educational Psychology*, 79(3), 280.

Martin, A.J. and Dowson, M. 2009, 'Interpersonal Relationships, Motivation, Engagement, and Achievement', *Review of Educational Research*, Vol. 79, No. 1, pp. 327-365.

Martin, A.J., Marsh, H.W., McInerney, D.M. and Green, J. 2009, 'Young People's Interpersonal Relationships and Academic and Nonacademic Outcomes', *Teachers College Record*, March 23.

Martinez, R.S., Aricak, O.T., Graves, M.N., Peters-Mysak, J. and Nellis, L. 2011, 'Changes in Perceived Social Support and Socioemotional Adjustment Across the Elementary to Junior High School Transition', *Journal of Youth and Adolescence*, Vol. 40, pp. 519-530.

McCoy, S., Smyth, E. and Banks, J. 2012, *The Primary Classroom: Insights from the Growing Up in Ireland Study*. Dublin: NCCA.

McCoy, S., Smyth, E., Watson, D. and Darmody, M. 2014a, *Leaving School in Ireland: A Longitudinal Study of Post-School Transitions*. Dublin: ESRI.

McCoy, S., Quail, A. and Smyth, E. 2014b, 'The Effects of School Social Mix: Unpacking the Differences', *Irish Educational Studies*, 33 (3): 307-330.

Mellor, D. and Delamont, S. 2011, 'Old Anticipations, New Anxieties? A Contemporary Perspective on Primary to Secondary Transfer', *Cambridge Journal of Education*, Vol. 41, No. 3, pp. 331-346.

NCCA (2011), *Towards a Framework for Junior Cycle*. Dublin: NCCA.

O'Brien, M. 2003, 'Girls and Transition to Second-Level Schooling in Ireland', *Gender and Education*, Vol. 15, No. 3, pp. 249-267.

O'Brien, M. 2004, *Making the Move: Students', Teachers' and Parents' Perspectives of Transfer from First to Second-level Schooling*. Dublin: Marino Institute of Education.

Piers, E.V. and Harris, D.B. 1964, 'Age and other correlates of self-concept in children', *Journal of Educational Psychology*, 55(2), 91.

Piers, E.V. and Herzberg, D.S. 2002, *Piers-Harris children's self-concept scale: Manual*. Western Psychological Services.

Rasbash, J., Steele, F., Browne, W.J. and Goldstein, H. 2012, *A User's Guide to MLwiN*. Bristol: University of Bristol.

Reid, K. 2013, *Managing school attendance: Successful intervention strategies for reducing truancy*. Routledge.

Reyes, O., Gillock, K. and Kobus, K. 1994, 'A Longitudinal Study of School Adjustment in Urban, Minority Adolescents: Effects of a High School Transition Program', *American Journal of Community Psychology*, Vol. 22, No. 3, pp. 341-369.

Rogers, C.M., Smith, M.D., and Coleman, J.M. 1978, 'Social comparison in the classroom: the relationship between academic achievement and self-concept', *Journal of Educational Psychology*, 70(1), 50.

Roorda, D.L. and Koomen, H.M.Y. 2011, 'The Influence of Affective Teacher-Student Relationships on Students' School Engagement and Achievement: A Meta-Analytic Approach', *Review of Educational Research*, Vol. 81, No. 4, pp. 493-529.

Rudduck, J., 1996. 'Going to 'the Big School': the Turbulence of Transition', in J. Rudduck, R. Chaplain and G. Wallace (Eds.), *School Improvement: What Can Pupils Tell Us?* London: David Fulton.

Sammons, P., Sylva, K., Melhuish, E., Siraj-Blatchford, I., Taggart, B., Grabbe, Y. and Barreau, S. 2007, *Effective Pre-School and Primary Education 3-11 Project (EPPE 3-11): Summary Report, Influences on Children's Attainment and Progress in Key Stage 2: Cognitive Outcomes in Year 5*. London: Institute of Education.

Smyth, E. 1999, *Do Schools Differ?* Dublin: Oak Tree Press/ESRI.

Smyth, E. 2016, *Students' Experiences and Perspectives on Secondary Education: Institutions, Transitions and Policies*. London: Palgrave Macmillan.

Smyth, E., Banks, J. and Calvert, E. 2011, *From Leaving Certificate to Leaving School*. Dublin: Liffey Press/ESRI.

Smyth, E., Dunne, A., Darmody, M. and McCoy, S. 2007. *Gearing up for the Exam? The Experiences of Junior Certificate Students*. Dublin: Liffey Press/ESRI.

Smyth, E., McCoy, S. and Darmody, M. 2004, *Moving Up*. Dublin: Liffey Press/ESRI.

Stevenson, D.L. and Baker, D.P. 1987, 'The family-school relation and the child's school performance', *Child Development*, 58 (5), 1348-1357.

Timmermans, A.C., Snijders, T.A.B. and Bosker, R.J. 2013, 'In Search of Value Added in the Case of Complex School Effects', *Educational and Psychological Measurement*, Vol. 73, No. 2, pp. 210-228.

Tobbell, J. and O'Donnell, V.L., 2013, 'The Formation of Interpersonal and Learning Relationships in the Transition from Primary to Secondary School', *International Journal of Educational Research*, Vol. 59, pp. 11-23.

Topping, K., 2011, 'Primary-secondary Transition: Differences between Teachers' and Children's Perceptions', *Improving Schools*, Vol. 14, No. 3, pp. 268-285.

Turney, K., and Kao, G. 2009, 'Barriers to school involvement: Are immigrant parents disadvantaged?', *The Journal of Educational Research*, 102(4), 257-271.

Whitby, K., Lord, P., O'Donnell, S. and Grayson, H., 2006, *Dips in Performance and Motivation: A Purely English Perception?* Slough: NFER.

Wigfield, A., Eccles, J. S., MacIver, D., Reuman, D. A. and Midgley, C. 1991, 'Transitions During Early Adolescence: Changes in Children's Domain-Specific Self-Perceptions and General Self-Esteem Across the Transition to Junior High School', *Developmental Psychology*, Vol. 27, No. 4, pp. 552-565.

Williams, J., Thornton, M., Morgan, M., Quail, A. and Smyth, E., forthcoming, *The Lives of Thirteen Year Olds*. Dublin: DCYA.

Williams, B., Williams, J. and Ullman, A. 2002, *Parental Involvement in Education*. Nottingham: Department for Education and Skills.

Willis, P. 1977, *Learning to Labour*. Farnborough: Saxon House.

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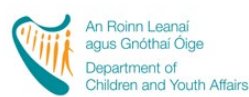**in Ireland**
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