Introduction

Children and young people experience a number of educational transitions throughout their lives, for example, from different early childhood arrangements to beginning primary school, yearly class changes within a school, and moving between schools, including the move from primary to secondary school. These transitions pose challenges for children and young people as they adjust to their new environment, new rules, routines and ways of working, and new teachers and students. Their ability to cope with these changes is likely to influence the ways in which they progress and develop.

Background

There is often a decline in students' achievement following transition.

The age at which students move from primary to secondary schooling varies from country to country but in New Zealand most students generally make this transition between the ages of 12 and 14 years. According to the international research, there is often a decline in students' academic achievement following the move to secondary schooling, irrespective of the age at which this occurs. McGee et al (2003) conclude that it may be the change of school environment that makes the difference rather than the age at which students make the change. Furthermore, other studies reviewed by McGee et al suggest that when students make two transitions, for example, in the New Zealand context, from primary to intermediate school and then two years later, on to secondary school, students' achievement is likely to drop at both transition points.

As well as showing a drop in academic achievement over the transition from primary to secondary schooling, a number of projects have found that there is a decline in students' attitudes towards particular subjects as they progress through the school system.[2]

Very little New Zealand research has been carried out that links the transition to secondary schooling to school achievement.

Despite the wide body of international research around the transition to secondary schooling very little research has been carried out in this area in New Zealand. In their review, McGee et al concluded that:

"There are numerous gaps in what is known about transition. Much of the New Zealand information is anecdotal and there is a shortage of research information that links transition to school achievement. Furthermore, much more needs to be known about different student populations." (p. 53)

More specifically, there was very little information about the experiences of Māori and Pasifika students as they moved from primary to secondary schooling.

These students tend to be over-represented in low decile schools and figure disproportionately in the overall 'at risk students' group. Available research evidence suggests that 'at risk students' are most likely to experience difficulties associated with transition (McGee et al, 2003).

Rationale for the research

In response to the need for more information on this transition point in the New Zealand context the Research Division of the Ministry of Education designed an in-depth, exploratory study. The study followed a diverse group of around 100 students over 18 months, before and at three points following the Year 8 to Year 9 transition.

A major purpose of the study was to establish whether the transition to secondary schooling is a significant issue for students and to better understand the teaching, learning and social environments being provided for students in schools and the impacts of these on student achievement.

This report specifically addresses the following research questions:

- How do students perform on a set of common measures in aspects of literacy and numeracy shortly before, and after, transition?
- Are there general trends in academic achievement following transition?
- What differences are there for particular groups of students?
- What are students' predictions about their own learning prior to, and after transition?
- How do students view and rate their own learning prior to and following the transition to secondary school?
- What do students see as the most significant impacts on their learning and achievement?

[2] Eccles, J.S. & Wigfield, A. (1993), cited in McGee et al (2003). In the New Zealand context, projects such as the National Education Monitoring Project (NEMP), Competent Learners @ 14, and Assessment Tools for Teaching and Learning (asTTle) have also found similar results.

How the study was conducted

To monitor any immediate impact the transition had on students' achievement and to monitor subsequent changes to their achievement as students progressed through Year 9 and into Year 10, the Transition Study[3] was designed to collect comprehensive data at four time points: Term 4, 2003 when the students were in their last weeks at primary or intermediate school (Phase 1); towards the end of Term 1, 2004, when the students had been at secondary school for a number of weeks (Phase 2); Term 4, 2004, when students were nearing the end of Year 9 (Phase 3); and towards the end of Term 1, 2005 when the students were in Year 10.

Information was collected at four time points over 18 months.

Participating schools

Our first task in the early stages of the study was to secure the participation of two secondary schools. As the study methodology required us to visit the secondary schools on three separate occasions over 14 months it was essential that these schools were well-informed about the study and were keen to participate for the duration. Due to the exploratory nature of the study, and, for ease of access, a decision was made to choose one secondary school from the Wellington region to take part. We chose Auckland as our second school site due to the diversity of the student population in that region.

This study had a particular emphasis on Māori and Pasifika students. The Ministry of Education Regional Offices in Auckland and Wellington were consulted for recommendations of suitable schools in their regions with reasonably high proportions of Māori and Pasifika students and which were not, at the time of the study, involved in other research or major initiatives.

Two schools were selected based on the above criteria. They were both co-educational Year 9–13 schools and designated as deciles 2 and 3. Our next step involved phoning the principals of these schools to explain the study and to discuss what their involvement would entail. We then followed up by sending them more detailed information about the study.

Once both secondary school principals agreed to take part our next step was to choose the feeder primary and intermediate schools, from which we would select our sample students. The principals provided us with a list of their main contributing primary and intermediate schools and from there we selected a sample of schools based on the anticipated number of students coming from each contributing school, at the same time ensuring we chose schools to represent a range of school deciles. Our aim was to select around 20 students in each case from three feeder schools in each region. But this was not possible in Auckland, as only small numbers of students from multiple feeder schools came to attend the selected secondary school.

Eight primary and intermediate schools agreed to participate in the study.[4] Of these, three primary and two intermediate schools (deciles 1, 2, 3, 7 and 9) were located in Auckland and the remaining three primary schools (deciles 2, 4, and 9) in Wellington.[5] Students in these schools were invited to take part in the study on the basis that they would be attending one of the chosen two secondary schools the following year (2004).

Classroom teachers at participating primary and intermediate schools were generally responsible for taking their particular students for mathematics, reading and writing. However, a few of the schools in our sample had implemented specialist mathematics and reading programmes, based on student ability, to enable students to receive more individual support in these areas outside of their usual classroom environment.

Both of the secondary schools in our study operated some class streaming in Years 9 and 10, based on students' numeracy and literacy skills.

Participating students

A total of 112 Year 8 students agreed to participate (with parental approval) at the beginning of the study (Phase 1). Well over half of these students (N=67) attended deciles 1–3 schools, 10 attended a decile 4 school and 35 attended deciles 7–9 schools.

Eight primary and intermediate schools took part in Phase 1 of the study.

By the end of Term 1 of the following year (Phase 2), on our first visit to the secondary schools, our sample had decreased to 104 students as a result of a few students deciding to attend alternative

3 Also referred to as the *Students' Transition from Primary to Secondary Schooling* study.

4 Ten primary and intermediate schools were approached but two declined to participate.

5 No intermediate schools in Wellington were involved.

secondary schools. A number of other students also changed schools during subsequent phases of the study, decreasing our sample to 100 students in Phase 3 and 92 in Phase 4. There was no provision in our methodology to follow students who moved to new schools. Only one student decided that they no longer wanted to take part in the study and this happened between Phases 3 and 4. None of the students who left the study were considered transient students.

Proportionally more students were lost from our Auckland sample than from our Wellington sample (13 students from Phase 1 to Phase 4 were lost from Auckland, compared with just five students over the same period from Wellington).

Despite the slight variation in student numbers over the course of the study, generally, our sample was made up of around 55 percent boys and 45 percent girls. Around 38 percent of participating students identified as New Zealand European/Pakeha, 27 percent as Pasifika, 17 percent as New Zealand Māori, and 18 percent as 'other' nationalities. Students in the 'other' nationalities category came from a variety of countries, including India, China, Sri Lanka, Thailand, Laos, Zambia, Iran and South Africa.

The majority of participating students (87%) spoke English at home.

Other participants in the study

Table 1 provides details of the numbers and different groups of people who took part in each phase of the study. In addition to talking with students, we were also interested in hearing what parents, principals, teachers, Years 9 and 10 Deans and others thought about the transition from primary to secondary schooling and its impact on students. Before the study began in Term 4, 2003, information sheets outlining the research and providing details of the type of information we would be collecting over the course of the study were given to students, parents and teachers.

Table 1: Participants in the study at each phase

Phase 1	Phase 2	Phase 3	Phase 4
Term 4, 2003	Term 1, 2004	Term 4, 2004	Term 1, 2005
112 Year 8 students[6]	104 Year 9 students[7]	100 Year 9 students[8]	92 Year 10 students[9]
8 primary and intermediate school principals	2 secondary school principals	2 guidance counsellors	2 Year 10 Deans
24 Year 8 teachers	17 Year 9 teachers		
3 Year 9 Deans	1 Year 9 Dean	2 Year 9 Deans	1 Year 9 Dean
60 parents	55 parents	59 parents	62 parents
	2 groups of Year 13 peer supporters		

6 Fifty-nine students in Wellington and 53 in Auckland.

7 Fifty-eight students in Wellington and 46 in Auckland.

8 Fifty-six students in Wellington and 44 in Auckland.

9 Fifty-two students in Wellington and 40 in Auckland.

The types of information collected

Most of the information from the study was collected by means of individual interviews with students, their parents, teachers, school principals, and other school staff (Table 1 provides details of the numbers of participants at each phase). But in the interests of capturing as much information as we could in a short time frame, and acknowledging that not everyone has the time or the desire to be interviewed on an individual basis, some information was collected from participants by questionnaire.

A major aim of the study was to investigate how the transition from primary to secondary schooling impacts on student achievement. To do this, students were assessed in mathematics, reading and writing at each phase of the study (i.e. before and after they made the transition) using asTTle.[10] These assessments provided a snapshot of students' achievement at four points over 18 months and enabled us to track their achievement in, and attitudes towards, the subject areas they were being assessed in as they moved from Year 8, to Year 9 and then into Year 10. Further details on how we went about doing this are covered in Chapter 2.

But asTTle was not the only form of assessment information collected during this study to gauge students' achievement and ability. Teachers were asked to complete information sheets on individual students at each phase of the study. We sought teachers' opinions on a range of topics, including students' overall levels of achievement and progress, whether they had any learning difficulties, their attitudes towards school, learning and their subjects, and their behaviour in class. This information was requested from the teachers detailed in Table 2; however, not all teachers completed information sheets for their students.

One of the aims of the study was to monitor how the transition to secondary schooling impacts on student achievement.

Table 2: Teachers who were asked to complete student information sheets

Phases	Teachers involved
Phase 1 (Term 4, 2003)	Year 8 class teacher
Phase 2 (Term 1, 2004)	Year 9 form teacher
Phase 3 (Term 4, 2004)	Year 9 form teacher Year 9 mathematics teacher Year 9 English teacher
Phase 4 (Term 1, 2005)	Year 10 form teacher

[10] Assessment Tools for Teaching and Learning (asTTle).

Reporting the results from the Transition Study

As mentioned previously, the study was undertaken over 18 months and incorporated four data collection phases and several groups of participants, which meant a wealth of information was collected. Because it was not feasible to include all this information in one report we have produced a series of three reports.

Structure of this report

As the name suggests, the present report, *Students' Achievement as they Transition from Primary to Secondary Schooling,* focuses specifically on students' achievement in mathematics, reading and writing at this particular period of their schooling, including some of the factors that seem to most impact on their achievement such as attitudes towards school, learning and subjects areas. The report also incorporates the views of students' parents and teachers in an attempt to further unpack the complexities of student achievement throughout the primary to secondary schooling transition.

The report begins by looking at the overall achievement trends for the students who took part in the study, followed by more in-depth analyses of different groups of students.

Where there is evidence of changes in patterns of achievement in one or more of the areas of mathematics, reading and writing following the transition, this is discussed in light of particular student characteristics or other factors which could help account for the change. There is also a brief comparison of our students' asTTle results with asTTle data from a national sample of students within the same year levels.

An important focus of the discussion is also on how students' attitudes to subjects and learning in general change over the course of the study.

More specific detail about the structure of the report is as follows.

Chapter 1 has provided background information about the study and detailed the rationale for undertaking the research.

Chapter 2 describes asTTle, the assessment tool used to monitor students' achievement over the course of the study.

In Chapter 3, we look at the general trends in students' achievement in mathematics, reading and writing at each phase and also provide details of the curriculum levels students were achieving at.

The ways in which individual students' achievement in mathematics, reading and writing changed over the course of the study, and the performance of students who were variously achieving in the bottom or top quartiles, or in the middle half for all students, are discussed in Chapters 4 and 5.

Students' attitudes towards school, their teachers and their subjects are considered in Chapter 6. A look at further aspects, not already discussed in the report, which may impact on students' achievement, such as the level of parental support a student receives and their participation in extra-curricular activities, follows in Chapter 7. And in Chapter 8 we analyse the different views of students, parents and teachers in relation to students' learning and achievement.

Finally, Chapter 9 discusses the key findings which have emerged from our analyses.

Other reports in the Transition Study series

Details of the two further reports on the Transition Study are outlined below.

The Case of Emily: A Focus on Students as they Transition from Primary to Secondary Schooling

This report, available now, discusses students' experiences as they are about to complete their primary schooling and move on to secondary school. It illustrates how students develop or change over this period of their schooling. The report is written in the form of a case study of one student, 'Emily', while making reference to data for all other students who participated in the study.

Easing the Transition from Primary to Secondary Schooling: A Resource Document

The final report in the series, which will be available later in 2008, comprises a resource document for schools and others, which contains 'practical suggestions' arising from the study findings, taking into account contributions from participating principals, teachers, students and parents. Some of the topics covered have a more specific focus on the Year 8–9 transition, while others have wider educational implications than the transition per se.

The report has a particular emphasis on students most likely to experience difficulties in their transition to secondary schooling, including insights from teachers, parents and others on the characteristics of students they think are most and least likely to make a successful transition. It contains a number of short case studies to show how the experience of individual students in the 'same situation' can contrast widely.

Important points to keep in mind when reading this report

This is an exploratory study, involving a relatively small sample of schools and students. While we chose two lower decile secondary schools (deciles 2 and 3) to participate in the study to ensure a higher proportion of Māori and Pasifika students in our sample, the overall number of students from these groups is still small and therefore limits the extent to which we can generalise our results. However, it is hoped and believed that a compensating strength of our analyses is the ways in which we have been able to look at students' achievement over the transition in conjunction with the rich interview data, and other information, collected from the students, their parents and their teachers.

A study of this size cannot possibly capture what the transition is like for all New Zealand students. School type, size and geographical location will undoubtedly provide different experiences and opportunities for students. Our students attended schools in large urban areas and, therefore, their views and experiences of the transition to secondary school may differ from those of students from, for example, rural areas.

We had initially hoped to sample sufficient students from intermediate schools to enable us to look at any differences that may be evident between students who attended an intermediate and therefore underwent two significant transitions – one from primary to intermediate school and another from intermediate to secondary school – and those who attended full primary schools and made just one transition (not counting students who had attended more than one primary school). Unfortunately, this was not possible as we only had 21 students in our sample who were attending an intermediate school at the beginning of the study. Some comparative information on the achievement of students who attend intermediate schools is, however, available through the analyses of national asTTle data.[11]

Within the context of this study, the Year 8 to Year 9 transition involved a change of schools for all participating students. The experiences of students in composite schools (Years 1–15), who remain in the same school as they transition from primary to secondary, are not represented in the present report.

Students in this study were assessed in mathematics, reading and writing. While these subjects provide an overall guide to how students are achieving in their main class work, they do not necessarily give a complete picture of students' strengths and weaknesses. While we also collected some information from students, parents and teachers during the study on subjects other than mathematics, reading and writing that students thought they were good at, and most and least liked, we will not be focussing on these in this report.

[11] Project asTTle team (2006a), (2006b) and (2006c).