NEGOTIATING CHANGE; THE IMPACT OF SCHOOL TRANSFER ON ATTAINMENT, SELF-ESTEEM, SELF-MOTIVATION AND ATTITUDES IN PHYSICAL EDUCATION

A thesis submitted for the degree of Doctor of Philosophy

by

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Abstract

The purpose of this study was to identify any changes in attainment, self-esteem, self-motivation and attitudes to physical education between the end of year 6 and the beginning of year 8 (during the transfer from primary to secondary school), and to establish the extent of any differences between gender, age of transfer and school attended. Consideration was also given to the ways in which continuity and promotion was promoted between schools involved in the study.

Data was collected on four occasions over a 20-month period. Data pertaining to attainment was collected using observation techniques and teacher assessment, whilst self-esteem and self-motivation was collected using questionnaires. Attitudinal data, information relating to physical education, and continuity and progression data were collected using questionnaires and interviews.

Results showed significant increases in attainment, self-esteem and self-motivation between the end of year 6 and the beginning of year 8. Significant differences were evident in relation to gender, age of transfer and secondary school attended. Significant positive relationships were found between attainment and self-esteem, attainment and self-motivation, and self-esteem and self-motivation, allowing a tentative relationship model to be proposed. Changes in attitudes towards physical education were also found.

Whilst teachers acknowledged the importance of continuity and progression, links between schools focused on social / pastoral rather than curricular issues. Time, staffing issues and finance were identified as the main constraints to the establishment of links.

What emerges is a complicated picture of inter-related factors, with no universal solution. Each teacher must consider this broad range of factors within the context they teach. In order to do this there is perhaps a need to raise awareness amongst teachers of the impact of the transfer between primary and secondary phases of education on pupils across curriculum subjects, and that this should be explicitly considered and planned for.

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Chapter 1: Introduction

1.1 Introduction

All of us at some point have experienced a change in the school that we attended. Such changes may have been forced on us as parents moved, or occurred naturally as we progressed along our educational pathways. For most of us, the movement from primary to secondary school was a mini adventure as we moved from the security of our single teacher and classroom, to the imposing secondary school with different teachers and classrooms each lesson. To guide us through this adventure we had our friends, both old and new, our school map, and for some of us our brothers and sisters – although we occasionally questioned the reliability of the information they all gave us. Like any good adventure it was based on myths and legends, but did anyone ever ask us how we felt?

As a teacher of physical education in secondary schools for 9 years, I witnessed this movement annually. I would be there to offer advice on the arrival of new pupils and outline what was expected of them. As a tutor I would receive information about their attainment in English, mathematics and science. I would have some knowledge of which pupils were friends, whether they had brothers or sisters in the school. In terms of pastoral information I had a plethora of information. However in terms of my subject area (physical education) this was much more limited.

On arrival for the pupils' first physical education lesson, I would start with the basics, disregarding what they had previously been taught, for no other reason than because I did not know. I perpetuated a system that had been in existence for years, a system that was based on what we as teachers felt was appropriate. Yes I knew who the sporting individuals amongst the new intake were; this was provided by the schools in the transfer information provided during visits by the assigned member of staff from our secondary school to our primary feeder schools. But I had no knowledge of the curriculum they had previously been taught. I adopted the 'fresh start' approach, disregarding their previous experiences.

As I became more experienced I began to talk to primary school teachers and identify what they taught, realising that I was repeating curriculum content. Could this be why some pupils in my care looked bored and started to opt out of the curriculum? Was the fault not at the feet of the pupils, but at the way in which I approached my teaching?

What started to emerge was that whilst I felt I was a good teacher, I might have not been an effective teacher. Leask (2001) suggests, "Effective teaching occurs where the learning experience structured by the teacher matches the needs of the learner" (p.12). In order to develop as an effective teacher I needed to understand more fully the changes pupils experienced during the movement between primary and secondary school, and more specifically to look at how these changes impact upon them within a physical education context. As a result of this I would be able to identify more clearly what teachers needed to do to make the movement from primary to secondary school more effective for pupils.

1.2 Statement of the problem

The natural movement of pupils from primary and secondary school has been evident from the introduction of compulsory education in England, as children move from class to class, year to year, or school to school. The impact of this change of school has been a reoccurring theme in education throughout the 20th century (Schools Council, 1972; Department for Education and Science (DES), 1985; Derricott, 1987), and is an underpinning concept within current educational provision reflected in National Curriculum planning and organisation.

Implicit within the National Curriculum taught in England is the need to promote continuity and progression throughout pupils' education and in particular during the movement from primary to secondary schools. This is based on the need to build upon previously acquired and developed knowledge, skills and understanding. However, the extent to which such provision is reflected in practice is less clear. Models of transfer (Youngman, 1980; Derricott, 1987; Galton, Gray & Rudduck, 1999) have evolved, highlighting strategies that can be employed to support transfer between primary and secondary school. However research (McCallum, 1996; Office for Standards in Education (OFSTED), 2002; Williams & Howley, 1989) demonstrates a tendency to focus towards the transfer of pastoral information between schools. What academic information is provided reflects attainment in the core subjects of English, mathematics and science, to the detriment of other curriculum subjects.

Research (e.g. Doyle & Herrington, 1998; Galton, et al., 1999: Hirsch & Rapkin, 1987; Nottelmann, 1987, Reeves & Cooper, 1994; Wigfield, Eccles, MacIver, Reuman & Midgley, 1991) has suggested a change of school may impact upon, for example, pupils' attainment, self-esteem, motivation and attitudes.

Commonalities in suggested reasons for changes are apparent, and include changes in the school environment (for example moving from a small school to a large school); changes to teaching style (for example moving from a child-centred approach to learning to a subject-centred approach); changes in status (for example from being the oldest in the school to being the youngest in the school); and the repetition of work. However results of research disagree on whether the effects of such changes are positive or negative. Further, research conducted in this area has tended to focus on the core subjects of English, mathematics and science resulting in a dearth of research focusing on other curriculum subjects taught within schools, including physical education.

1.3 Purpose of the study

The purpose of this present study was to identify any changes in attainment, self-esteem, self-motivation and attitudes in physical education between the end of year 6 and the beginning of year 8 (during the transfer from primary to secondary school), and to establish the extent to which differences occurred between boys and girls, the age at which transfer occurred, and the school attended. Consideration was given to the ways in which continuity and progression was promoted between schools involved in the study, specifically in respect the transfer of information pertaining to physical education. In doing so the study sought to add to the growing body of literature in education looking at the impact of a change of school on pupils and more specifically raise issues regarding transfer between primary and secondary schools in physical education.

1.4 Structure of the thesis

This thesis is divided into 5 chapters. The present chapter has provided an outline of the rationale behind the study reflecting upon the experience of the researcher in an educational setting and identifying issues evident from within current research literature.

In Chapter 2, the Review of Literature, initial consideration is given to why pupils change school and the age at which this occurs. Consideration is then given to the National Curriculum in England to provide detail regarding curriculum content, and more specifically how physical education is taught within the remit of the National Curriculum. The distinct phases of education (primary and secondary) and the rationale behind their inception are identified and links made to the theories and models of development, allowing consideration to be given to how movement

between these phases may be influenced by the development of the child. Consideration is given to pastoral and curricular issues that may arise during transfer, specifically how attainment, self-esteem, motivation and attitudes are influenced. How the transfer from primary to secondary school is managed becomes the next section of the chapter. From this the purpose of the research is provided.

Chapter 3 reviews the methodological approaches that can be used when conducting education based research, and highlights the advantages and disadvantages of each approach. From this the methods employed within the study, and the methods employed to analyse the data collected are explained.

An analysis of the findings of the research is provided in chapter 4.

Chapter 5 discusses the main results of the study and how they relate to previous research. The implications of these results for teachers are identified and recommendations made. Limitations of the research are also discussed, with suggestions made as to areas requiring further research.

Chapter 2: Review of Literature

2.1 Introduction

Within the structure of the English education system, pupils are required to negotiate changes in classes and schools at various periods of time. Changes in class occur annually as pupils move within a school, whilst changes of school occur less frequently, for example between the end of primary school and the beginning of secondary school. Although such change is a natural occurrence, for many pupils movement may coincide with biological, physical and psychological changes evident during the natural process of development.

Research (Howarth & Head, 1988; Schachar, Suss & Sharan, 2002; Steed & Sudworth, 1987) suggests that, during movement both within and between schools, pupils experience a number of personal changes. Such changes occur predominantly in the areas of; attainment (Doyle & Herrington, 1998; Galton, et al., 1999, Qualification & Curriculum Authority (QCA), 2002; Sainsbury, Whetton, Mason & Schagen, 1998), self-esteem (Eccles, Wigfield, Flanagan, Miller, Reuman & Yee, 1989; Hirsch & Rapkin, 1987; McCarthy & Hoge, 1982), motivation (Bouffard & Couture, 2003; Chen, 2001) and attitudes (Anderson, Jacobs, Schramm & Splittgerber, 2000; Coe, 1984).

This chapter is divided into 8 sections. Initially consideration is given to why pupils change school within the English education system, and how the age at which this occurs relates to the development of the education system over time. The current National Curriculum taught in England, with a specific focus on physical education, is then considered. Links are made between phases of education, the National Curriculum and the development of the child, allowing for the identification of pastoral and curriculum issues which may influence pupils' when they transfer from primary to secondary school. Ways of limiting the impact of such issues are explored. Following a summary, the purpose of the study and the specific hypotheses are explored.

The chapter is therefore divided into the following sections:

- The Development of the Education System
- The National Curriculum in England
- Development of the child
- Transfer between Schools

- Managing the transfer from primary to secondary School
- Summary
- Purpose of the Study
- Hypotheses

2.2 The Development of the Education System

Movement between phases of education (from primary to secondary) is generally referred to as transition. For example, Derricott (1987) defines transition as the "process involved in moving from stage to stage" (p.13); Tabor (1993) defines it as "moves between recognized stages of education" (p.11). Whilst Derricott (1987) and Tabor (1993) suggest transition to be the movement between stages of education, for example between schools, Galton et al., (1999) define transition as "the move from one year group to the next within a school" (p.5), i.e. the movement from one class / year to the next in the same school, a yearly cycle within education. Likewise, Demetriou, Goalen and Rudduck (2000), suggest that transition is the "movement from one year to another within the same school" (p.425). Thus transition can be interpreted as both movement between schools or between stages of education, and also movement within schools.

Galton et al., (1999) define transfer as "the move from one school to another" (p.5). Likewise, Demetriou et al., (2000), identify transfer as the "move from one stage of schooling and from one school to another" (p.425). Thus definitions suggest that transfer reflects the movement between schools. For the purpose of this study the term transition is used to describe the movement of pupils within school, thus between years and the term transfer is used to mean the movement of pupils between schools.

Whilst two main stages of education exist within the English education system; primary school and secondary school, movement between the two does not necessarily occur at the same time or age for all pupils.

2.2.1 Age of Transfer

For most pupils in England, transfer from primary to secondary school occurs at the age of 11. However, additionally these pupils may change school earlier during the transfer from infant school to junior school. Other pupils however, may transfer from lower school to middle school at the age of 8 or 9, and from middle school to secondary school at age 12 or 13.

Differences in ages of transfer reflect the development of the education system in England and changes to the age at which pupils commenced and completed compulsory education, as well as the perceived differences in educational requirements as age increases. A summary of how ages of transfer from primary to secondary school have changed is shown in table 2.1.

Table 2.1

Reports which discussed changes to ages of transfer between 1861 and the present day

Date	Report	Primary School	Middle School	Secondary School
1816	Lower Orders in the Metropolis	3 – 5 / 6 Training schools (optional) 5 / 6 - 10 Superior schools (optional)		10 – 13 Superior schools (optional)
1861	Newcastle Report	3 – 10 / 11 (optional)		10 / 11 – 13 (optional)
1870	Education Act	5 – 13		10 / 11 - 14 / 16 / 18 – 19 (optional)
1918	Fisher Education Act	5 – 14		14 - 16/17 (optional)
1926	Hadow Report	5 – 11		11 – 15 (optional)
1944	Education Act	5 – 11		11 – 15
1959	Crowther Report	5 – 11		11 – 16
1967	Plowden Report	5 – 11		11 – 16
		5 – 8	8 - 12 (deemed primary)	12 / 13 - 15 (16)
		5 – 9	9 - 13 (deemed secondary)	

First reference to the ages of transfer can be found in the Reports of the Parliamentary Committees on the Education of the Lower Orders in the Metropolis and beyond (1816 – 1818). The report, commissioned to look at the provision of education in London, identified 3 as the age at which pupils could be admitted, to what they called training schools, to commence formal education. Evidence regarding the reasoning behind the age at which children were expected to start going to school is not stated explicitly in the documentation. However it would appear

(Maclure, 1986) it reflected a desire by those responsible for educational policy to limit the opportunities for children to develop perceived bad habits.

Attendance at training schools, also known as preparatory schools, although not compulsory, was up to the age of 6, upon which optional transfer to superior schools occurred. Training schools were identified as schools;

> ... in which they [pupils] are perpetually superintended, to prevent them acquiring bad habits, to give them good ones, and to form their dispositions to mutual kindness and a sincere desire to contribute all in their power to benefit each other; these effects are chiefly accomplished by example and practice, precept being found of little use, and not comprehended by them at this early age; the children are taught also whatever may be supposed useful, that they can understand, and this instruction is combined with as much amusement as is found to be requisite for their health, and to render them active, cheerful and happy, fond of the school and of their instructors (Maclure, 1986, pp.24-25).

Superior schools focussed upon more academic instruction than the training schools, developing competence in reading, writing and mathematical principles necessary to progress within society. Transfer to superior school was dependent upon "bodily strength and mental capacity" (Maclure, 1986, p.25), with transfer taking place either at the age of 5 or 6. Thus the age which transfer occurred was to some extent flexible and reflected the stage of development reached by the pupil. Attendance at the superior school ceased at the age of 10, reflecting the age at which most children were expected to start work.

Whilst further education was accessible up to the age of 13, it was dependent upon the economic status of the family. The report into Lower Orders in the Metropolis suggested that education was accessible only to children "whose parents can afford to spare the wages which the children could now earn" (Maclure, 1986, p.25). Consequently, whilst those of poorer means entered the workplace, pupils from affluent families received up to a further 3 years of education in secondary schools. Education provision for those children, who had now become members of the work force, was provided through optional evening classes where the focus was placed on physical rather than intellectual development.

As a result of the 1861 Newcastle Report, schooling was still optional. Indeed "universal compulsory education appears to us neither attainable nor desirable" (Board of Education, 1861, p.300). However, there was a change to the school leaving age (see table 2.1), with age 11 established as the leaving age of "peasants", the term "peasants" reflecting the social class divisions of the time. However reasons for the change of age are not specified, although suggestions are made (Maclure, 1986) that it reflected a perception that extension of education beyond 10 and 11 would serve no beneficial purpose. Simon (1960) suggests that at age 10 and 11 children were deemed strong enough to be effective within the work place and therefore continued education was of limited value, further suggesting that by this age children had acquired the necessary academic attainment required. Secondary school education to age 13 continued to be optional and therefore generally restricted to those with the financial means.

Compulsory, state funded, primary education was introduced as a result of the 1870 Elementary Education Act for pupils aged 5 – 13 years. This change was based on the premise that an educated workforce was socially and economically more beneficial than an uneducated one (Forster, 1870). Although secondary education remained available, it was optional and restricted to those who demonstrated the required level of academic ability by passing prescribed entrance examinations, or to those who had the financial means to fund continued study. Thus, by the late 19th century educational provision had developed from optional to compulsory for children of primary school age, with the age at which education commenced changing from 3 to 5, and the leaving age for those pupils who did not progress to secondary school changing from 10 to 11 and finally 13 years.

Changes to secondary education provision were the focus of the 1902 Education Act. As a result of the Act, pupils were permitted to transfer to secondary school from the age of 8 onwards. The maximum age a pupil could transfer was 13, with optional attendance within the secondary school to 16 or 17 years. This range in ages of transfer reflected academic attainment rather than chronological age. Thus pupils who achieved the required level of competence could transfer to secondary school at any age up until the age of 13 years.

The 1902 Education Act also aimed to bring unity to primary and secondary school education by encompassing the two phases under one organising body (Board of Education), although the extent to which unity was established between primary

and secondary schools has been questioned (Maclure, 1986). Thus, by the start of the twentieth century, all pupils were required to attend primary school from the ages of 5 – 13, with pupils able to transfer to secondary school from the age of 8. However, secondary education remained optional and dependent on academic ability or financial backing.

An extension to Elementary (primary) education was introduced as a result of the 1918 Fisher Education Act (Andrews, 1976; Dent, 1970). It became compulsory for all children to attend school up to the age of 14 with optional attendance at secondary school to the age of 16 or 17. This acknowledged the need to provide state education for those pupils up to the age of 14 who lacked financial means to pay, to further develop their academic knowledge.

The Hadow Report (Board of Education, 1926), entitled The Education of the Adolescent, looked at the age of transfer from primary to secondary school. Recommendations were made that a break be established within education at the age of 11, to acknowledge the changing educational requirements of pupils as they developed physically, emotionally and socially. To this extent it was proposed within the act that;

> By the time that the age of 11 or 12 has been reached children have given some indication of differences in interests and abilities sufficient to make it possible and desirable to cater for them by means of schools of varying types, but which have, nevertheless, a broad common foundation (Maclure, 1986, p.183).

The general consensus amongst educationalist was that "socially and emotionally eleven year old children were ready to face change" (Burrows, 1978, p.13), suggesting that at age 11 pupils were able to cope with the academic requirements of secondary education. Associated with this was the acknowledgement that primary and secondary school education where distinct phases requiring the adoption of differing "educational methods and organization" (Maclure, 1986, p.183). Further by reducing the age of transfer to 11 years, pupils had 3 years of compulsory education in the secondary school which would increase the length of time they spent in the secondary school and thus enhance their overall levels of success. McCulloch (2002) concluded that as a result secondary education became "the education of the adolescent" (p.36), building upon the foundations constructed within the primary schools.

Whilst a period of stability then ensued regarding ages of transfer, changes were made to the age at which compulsory education was completed. Compulsory secondary education became statutory as a result of the 1944 Education Act, which also established the completion of compulsory education at age 15. This increased to 16 as a result of the Crowther Report (Ministry of Education, 1959), although this was not implemented until the academic year of 1972 – 3.

However, although the school leaving age remained stable at 16, further modifications to the ages of transfer between primary and secondary school were still to be made. The 1967 Report of the Central Advisory Council for Education (CACE) (England) entitled Children and Their Primary Schools, more commonly referred to as the Plowden Report (1967) built upon previous governmental reports (Board of Education, 1931; Board of Education, 1933) in relation to the developmental needs of children. To this extent consideration was given to the most appropriate age of transfer from primary to secondary school and the extent to which children's developmental needs were catered for in the differing teaching environments. The Plowden Report (1967) concluded:

> For many children the changes of curriculum and method associated with a break at 11 cut across a phase in learning and attitude to it …..Their progress may be slowed down by premature emphasis on class instruction, adult systematisation and precision in secondary schools (para.371).

The conclusions drawn by the Plowden Report (CACE, 1967) established that transfer to secondary school should occur at aged 12 or above, thereby increasing the amount of time spent within the primary sector. As a result of this report, some Local Education Authorities (LEAs) introduced a three-tier education system, with pupils attending primary school (up until the age of 8 or 9), middle school (from age 8 or 9 until the age of 12 or 13) and secondary schools (from age 12 or 13 up until the age of 15/16). Middle school education aimed to provide:

> curriculum, methods and attitudes which exist in junior schools. It must move forward into what is now regarded as secondary school work but must not move so far away that it loses the best of primary education as we know it now (CACE, 1967, para.383).

The implication was that middle schools would better cater for the changing experiences of pupils in respect of the different cultures evident between primary and

secondary classrooms, thereby providing a transitional period between primary and secondary education.

However implementation of the middle school system was not statutory, rather it was at the discretion of each LEA. As a result the new system was not universally adopted. One reason for a lack of universal adoption were the concerns expressed by some LEA's and people within education regarding the impact of transfer on pupils between primary and secondary school at age 11 which occurred for most pupils already, and the implication of introducing a second transfer of school for pupils who attended middle schools. Those LEA's who chose not to adopt the system maintained a transfer age of 11.

Thus, diversity between LEA's was established. Whilst the majority of LEA's have adopted the traditional two tier, primary and secondary school system with primary to secondary transfer occurring at age 11, other LEA's have adopted the three tier, middle school system, either in the form of the middle school (deemed primary) catering for the age range 8 – 12, or the middle (deemed secondary) catering for the age range 9 – 13. Further some LEA's, in response to the concerns expressed post Plowden in respect of middle schools introducing a second change of school, have adopted a combined infant / middle school approach, with such schools referred to as combined schools. Within such schools transfer to secondary school occurs at age 12. Currently the middle school system occurs in 38 of the total 150 LEA's in England (www.ofsted.gov.uk), although recent reports suggest that the number of middle schools are declining due to school closures and the National Curriculum (Howson, 2002).

Within England therefore, changes to the age of transfer reflected the development of the compulsory education system and have focussed predominantly on the movement of pupils between primary schools and secondary schools. Changes to the age at which compulsory education commences and is completed have also been made. However, it is not clear whether the ages of starting and leaving school, and of transfer from one phase of schooling to another have been based on the needs of children at various stages of development or has been a result of social and pragmatic reasons or a combination of both. What has evolved are two distinct phases of education – primary and secondary. These distinct phases reflect perceived differences in the curriculum content and pedagogic approaches (Hopper, Grey & Maude, 2000; Lance, 1994) to teaching and learning.

2.3 The National Curriculum in England

Introduced as a result of the 1988 Education Reform Act (DES, 1989), the National Curriculum in England is currently in its third revision. The rationale behind the curriculum itself has remained stable, having as its central aims the provision of "opportunities for all pupils to learn and to achieve" and the promotion of "pupil's spiritual, moral, social and cultural development and prepare all pupils for the opportunities, responsibilities and experiences of life" (Department for Education & Employment (DfEE) / Qualification and Curriculum Authority (QCA), 1999a, p.11). Underpinning the aims of the National Curriculum, there are four main purposes;

- The establishment of entitlement:

  > "The National Curriculum secures for all pupils, irrespective of social background, culture, race, gender, differences in ability and disability, an entitlement to a number of areas of learning and to develop knowledge, understanding, skills and attitudes necessary for their self-fulfilment and development as active and responsible citizens"

- The establishment of standards:

  > "The National Curriculum makes expectations for learning and attainment explicit to pupils, parents, teachers, governors, employers and the public, and establishes national standards for the performance of all pupils in the subjects it includes. These standards can be used to set targets for improvement, measure progress towards those targets, and monitor and compare performance between individuals, groups and schools"

- The promotion of continuity and coherence:

  > "The National Curriculum contributes to a coherent national framework that promotes curriculum continuity and is sufficiently flexible to ensure progression in pupils learning. It facilitates the transition of pupils between schools and phases of education and provides a foundation for lifelong learning"

- The promotion of public understanding:

> "The National Curriculum increases public understanding of, and confidence in, the work of schools and in the learning and achievements resulting from compulsory education. It provides a common basis for discussion of educational issues among lay and professional groups, including pupils, parents, teachers, governors and employers" (DfEE / QCA, 1999a, pp. 12 - 13).

Thus, the National Curriculum aims to provide pupils with an entitlement to an education, which equips them with the skills necessary to become integrated into society.

Further, the National Curriculum aims to provide pupils throughout their schooling with a broad and balanced curriculum, whereby they experience a range of subject areas within the course of their education. It comprises four Key Stages. These are shown in Table 2.2.

Table 2.2

The Four Key Stages in the National Curriculum

	Age range	Where predominantly taught
Key Stage 1	From commencement of formal education to the age of 7	Primary School
Key Stage 2	From age 7 to 11	Primary School
Key Stage 3	From age 11 to 14	Secondary School
Key Stage 4	From age 14 to 16	Secondary School

(Adapted from DfEE / QCA, 1999a, p.18)

Twelve subjects make up the National Curriculum, although not all of these subjects are taught throughout all of the four key stages. English, mathematics and science form the core of the curriculum. The remaining subjects are referred to as foundation subjects. Table 2.3 provides a summary of the core and foundation subjects, and the key stages in which they are taught.

Table 2.3

The Core and Foundation Subjects of the National Curriculum

Subject	Key stage 1	Key stage 2	Key stage 3	Key stage 4
Core subjects				
English	•	•	•	•
Mathematics	•	•	•	•
Science	•	•	•	•
Foundation Subjects				
Design and technology	•	•	•	• *
Information and communication technology	•	•	•	•
History	•	•	•	x
Geography	•	•	•	x
Modern foreign languages		x	•	• *
Art and design	•	•	•	x
Music	•	•	•	x
Physical education	•	•	•	•
Citizenship	x	x	•	•

(Adapted from DfEE / QCA (1999a) p.16).

• = statutory requirement x = non statutory requirement

* = non statutory requirement with effect from September 2004.

Within each subject area, the National Curriculum provides detail regarding the following:

- programmes of study
- attainment targets and level descriptors
- assessment arrangements.

Programmes of study are defined as "the matters, skills and processes which are required to be taught to pupils of different abilities and maturities during each key stage" (Department of Education & Science (DES), 1991, p.i). These programmes of study identify the specific knowledge, skills and understanding that pupils should be taught. Detailed information regarding what pupils should be taught is provided through curriculum documentation and, more recently, schemes of work.

Attainment Targets are defined as "the knowledge, skills and understanding which pupils of different abilities and maturities are expected to have by the end of each key stage" (DES, 1991, p.i). There are eight levels of attainment for each subject area with a further level for exceptional performance for pupils who perform beyond level 8. At each key stage a range of levels of attainment are identified as well as a level at which it is expected that the majority of pupils will achieve at the end of the key stage. These are shown in table 2.4. A description is provided for each level of attainment (see appendix A)which gives an overview of what pupils should be achieving at each level of attainment.

Table 2.4

Levels of Attainment

Range of levels of attainment, which the majority of pupils are expected to work at.		Expected attainment for the majority of pupils at the end of the key stage.	
Key Stage 1	1 – 3	At age 7	2
Key Stage 2	2 – 5	At age 11	4
Key Stage 3	3 – 7	At age 14	5 / 6
Key Stage 4	GCSE examinations	At age 16	GCSE examinations

(DfEE / QCA, 1999a, p.18)

In relation to assessment arrangements for the core subjects of English, mathematics and science, structured formalised statutory assessment tasks (SATs) are taken at the end of each key stage. These provide the levels of attainment for each pupil within each of the 3 core subjects. However in the foundation subjects the class teacher provides levels of attainment based on observations of pupils.

2.3.1 Physical Education and the National Curriculum

Within the National Curriculum, physical education is identified as a foundation subject. It is one of only three foundation subjects (see table 2.3) that schools are currently required to teach throughout each of the four key stages.

DfEE / QCA (1999a) define the benefits to the individual as a result of participation in physical education in the National Curriculum as:

> Physical education develops pupils' physical competence and confidence, and their ability to use these to perform in a range of activities. It promotes physical skilfulness, physical development and a knowledge of the body in action. Physical education provides opportunities for pupils to be creative, competitive and to face different challenges as individuals and in groups and teams. It

promotes positive attitudes towards active and healthy lifestyles. Pupils learn how to think in different ways to suit a wide variety of creative, competitive and challenging activities. They learn how to plan, perform and evaluate actions, ideas and performances to improve quality and effectiveness. Through this process pupils discover their aptitudes, abilities and preferences, and make choices about how to get involved in lifelong physical activity (p.174).

The programme of study for physical education in the National Curriculum (2000) is based around four content areas:

- Acquiring and developing skills: the acquisition of new and development of existing skills.
- Selecting and applying skills, tactics and compositional ideas: the selection and application of new and existing skills in a range of activity areas.
- Evaluating and improving performance: the ability to evaluate own and others performances in a range of activity areas, and use these evaluations to inform subsequent performance.
- Knowledge and understanding of fitness and health.

(Adapted from DfEE / QCA, 1999, p.176).

The specific requirements of these four content areas differ during the four key stages, and are summarised in table 2.5. They show a progressive development of the generic skills a child needs to perform effectively within the physical education context.

Table 2.5

Summary of the Programmes of Study for Physical Education in the National Curriculum

	Key Stage 1	Key Stage 2	Key Stage 3	Key Stage 4
Acquiring and developing skills	Explore basic skills, actions and ideas with increasing understanding. Remember and repeat simple skills and actions with increasing control and co-ordination.	Consolidate existing skills and gain new ones. Perform actions and skills with more consistent control and quality.	Refine and adapt existing skills. Develop them into specific techniques that suit different activities and perform them with consistent control.	Develop and apply advanced skills and techniques. Apply them in increasingly demanding situations
Selecting and applying skills, tactics and compositional ideas	Explore how to choose and apply skills and actions in sequence and in combination. Vary the way skills are performed by using simple tactics and movement phrases. Apply rule and conventions for different activities.	Plan, use and adapt strategies, tactics and compositional ideas for individual, pair, small-group and small-team activities. Develop and use knowledge of the principles behind the strategies, tactics and ideas to improve effectiveness. Apply rules and conventions for different activities.	Use principles to plan and implement strategies, compositional and organisational ideas in individual, pair, group and team activities. Modify and develop plans. Apply rules and conventions for different activities.	Use advanced strategic and / or choreographic and organisational concepts and principles. Apply these concepts and principles in increasingly demanding situations. Apply rules and conventions for different activities.
Evaluating and improving performance	Describe what they have done. Observe, describe and copy what others have done.	Identify what makes a performance effective. Suggest improvements based on this information.	Be clear about what they want to achieve in their own work, and what they have actually achieved. Take the initiative to analyse	Make informed choices about what role they want to take in each activity. Judge how good a performance is and

	Use what they have learnt to improve the quality and control of their work.		their own and others' work, using this information to improve its quality.	decide how to improve it. Prioritise and carry out these decisions to improve their own and others' performances. Develop leadership skills
Knowledge and understanding of fitness and health	Knowledge and understanding of: how important it is to be active; how to recognise and describe how their bodies feel during different activities.	Knowledge and understanding of: how exercise affects the body in the short term: how to warm up and prepare appropriately for different activities; why physical activity is good for their health and well-being; why wearing appropriate clothing and being hygienic is good for their health and safety.	Knowledge and understanding of: how to prepare for and recover from specific activities; how different types of activity affect specific aspects of their fitness; the benefits of regular exercise and good hygiene; how to go about getting involved in activities that are good for the personal and social health and well-being.	Knowledge and understanding of: how preparation, training and fitness relate to and affect performance; how to design and carry out activity and training programmes that have specific purposes; the importance of exercise and activity to personal, social and mental health and well-being; how to monitor and develop their own training, exercise and activity programmes in and out of school.

(Adapted from DfEE / QCA, 1999a pages 130 – 133 and 1999b pages 176 - 181).

In relation to a broad and balanced curriculum in the physical education, the breadth of study relates to the areas of activities that should be taught at each key stage. Within the National Curriculum for physical education there are 6 areas of activity, athletic activities, dance activities, games activities, gymnastic activities, outdoor and adventurous activities and swimming activities. The key stages at which each area of activity should be taught is shown in table 2.6.

Table 2.6

Breadth of Study for Physical Education in the National Curriculum

Key Stage	Areas of activity taught	Minimum number of areas to be taught
1	Dance, Games, Gymnastics	3
2	Dance, Games, Gymnastics plus two other from swimming and water safety, athletics and outdoor and adventurous activities	5
3	Games, and three from dance, gymnastics, swimming and water safety, athletics and outdoor and adventurous activities, of which at least one must be dance or gymnastics	4
4	Two activities from dance, games, gymnastics, swimming and water safety, athletics and outdoor and adventurous activities	2

(Adapted from DfEE / QCA, 1999b, pages 17 – 24)

From table 2.6, it can be seen that the breadth of study, and consequently the areas of activity which should be taught, varies between the key stages. In fact during key stage 2, a wider range of activities should be taught than at any other key stage. It is therefore necessary to distinguish between primary and secondary education in more detail.

2.3.2 Primary and Secondary phases of Education

As has been identified, the National Curriculum in England is divided into four key stages. Key Stages 1 and 2 are generally taught in primary schools, with Key Stages 3 and 4 being taught in secondary schools.

Primary education caters for pupils between the ages of five and 11, therefore key stages 1 and 2. The organisational structure of the primary schools is such that pupils are taught with the same class for most subjects, with the class teacher teaching the majority of lessons. However, there may be setting, whereby pupils are grouped according to ability, predominantly in the core subjects of English, mathematics and science. Movement around the school is minimal as lessons are

based in the same classroom, although subjects such as information and communication technology (ICT) and physical education are generally taught away from this classroom. Pedagogic approaches within the primary classroom are child-centred (Hopper, Grey & Maude, 2000; Lance, 1994), whereby learning is focussed on the individual, through exploration and experimentation.

The secondary phase of education focuses on key stages 3 and 4. The structure of secondary schools is built around subjects therefore, although pupils are generally assigned to a tutor group, it is unlikely that they will remain with the same pupils throughout the day. In contrast to primary schools, subject specialists teach the curriculum. This means that pupils may be taught up to five or more subjects by different teachers during each school day. Further, differences in pedagogic approach are also evident with the adoption of a subject-centred approach to learning (Lance, 1994).

As has previously been identified, where middle schools are evident they are categorised either as either middle (deemed primary) catering for the age-range 8 – 12, or middle (deemed secondary) catering for the age range 9 – 13, and adopt the characteristics of the associated educational phase.

Throughout the evolution of our current educational system reference is made to the developmental needs of pupils (e.g. Board of Education, 1926). It therefore becomes necessary to look at what these developmental needs are and how these may be influenced during the education of the child and more specifically during the movement in and between phases of education.

2.4 Development of the Child

As children grow and develop, Gallahue and Ozmun (1995) suggest they undergo changes across three domains which they refer to as; the cognitive, the affective, and the psychomotor. The cognitive domain looks at the ways in which knowledge is developed. The affective domain focuses on the self, in respect of feelings and emotions. Finally, the psychomotor focuses on the physical changes experienced during maturation and looks at how motor skills are developed. Theories and models of development have been proposed regarding how such development occurs. Some of these are outlined in the following section of the chapter.

2.4.1 Cognitive Development

Theories of cognitive development (e.g. Piaget, 1898 – 1980; Vygotsky, 1896 – 1934; and Bruner, 1915 -), suggest a staged theory of development whereby basic competences need to be developed before further development can be achieved.

2.4.1.1 Genetic Epistemology – (Piaget, 1898 - 1980)

Piaget and Inhelder (1969) stated that cognitive (also referred to as mental) development occurs through distinct stages that are successive and build upon previous experiences. Further that each stage "extends the preceding period, reconstructs it on a new level, and later surpasses it to an ever greater degree" (p.152). Further, they suggest that cognitive development occurs continually and progressively, and that such development occurs in a fixed order. Consequently a developing child assimilates new experiences into pre-existing knowledge and then accommodates such modifications into the environment in which they are placed. In this way they adapt their behaviours to reflect the changing situational context. Four distinct stages of development are identified. These are shown in table 2.7.

Table 2.7

Piaget's Stages of Cognitive Development

AGE	STAGE	BEHAVIOURS
Birth – 18 months	Sensorimotor	Learn through senses Learn through reflexes Manipulate materials
18 months – 6 years	Preoperational	Form ideas based on perceptions Can only focus on one variable at a time Over generalise based on limited experience
6 years – 12 years	Concrete Operational	Form ideas based on reasoning Limit thinking to objects and familiar events
12 Years and Older	Formal Operational	Think conceptually Think hypothetically

(Adapted from Smith, Cowie & Blades, 1998, p.336).

During the sensorimotor stage of development infants learn through reflexive responses (responses to sensory information) to their interaction with the

environment. Those actions they find pleasurable, they repeat. As they develop they become more aware of their environment, and begin to combine actions. Through this they begin to use trial and error to respond to stimuli.

The preoperational stage of development coincides with the main period of children's language development. During this stage children move from a self-centred focus to developing the ability to relate to others within their environment. Their perceptive ability develops, although their focus is limited to one thing at a time. As children progress through this stage, they are able to carry out simple tasks e.g. sorting of equipment in an ordered fashion, but are unable to explain why. As children progress into the Concrete Operational stage of development they begin to develop the ability to attend to more than one variable of a task at a time. Further, the development of their ability to reason results in their actions becoming more ordered and they are more able to describe what they have done, and why.

The final stage of cognitive development is that of the Formal Operational stage. During this stage, Piaget proposed that children / adolescents develop their ability to reason further, and can describe the existence of relationships. Further, their ability to hypothesise and predict outcomes develops. This stage will take place predominantly in the secondary school.

Throughout Piaget's stages of cognitive development, the focus is on the child, which suggests a child-centred approach to learning (Smith, et al, 1998) whereby a child develops knowledge through the activities undertaken. This is further highlighted by Garhart-Mooney (2000) who concluded that Piagetian theory argues "children learn best when they are actually doing the work themselves and creating their own understanding of what's going on, instead of being given explanations by adults" (p.62). By experiencing an activity through doing, the child develops more rapidly than they would were they to just observe. Within an educational context the role of the teacher / instructor is that of guide or facilitator, whereby they create learning situations that reflect individual needs and abilities, and provide opportunities for pupils to experience a variety of activities.

2.4.1.2 Social Development Theory – (Vygotsky, 1896 - 1934)

Vygotsky (1931) identified three stages of development. During early development changes to cognition reflect discovery learning, where trial and error are used to unify images. Associated with this is the development of spatial

awareness. During the second stage of development basic concepts previously developed become more complex as "the child begins to unify similar objects into a common group and finally to combine them according to the rules and objective connections which he is able to discover in things" (van der Veer & Valsiner, 1994, p.219). Thus, the second stage of development is linked to direct experience. The third stage reflects further refinement of cognition through the application of generalisations. Development through these stages occurs within periods of sensitivity, suggesting that the individual needs to be ready before further progress can be made. Consequently the age at which progression through each stage occurs is not uniform and reflects individual differences.

Vygotsky proposed that cognitive development occurs as a result of experience, and that these experiences needed to be both personal (internalised) and social (reflective of the individual's culture). Within his theory, Vygotsky identified the concept of play as crucial to learning, as it allows for interaction with others, reflecting the personal and social elements of learning. Natural development of the individual results in the acquisition of elementary thinking. Cultural influences help to develop this thinking and allow for the development of higher processes. As the individual matures, a movement away from external stimulation to self-generated stimulus reflects the development of independent learning.

Consequently, Vygotsky suggested that learning occurs as a result of social interactions with individuals who possess a greater level of knowledge than the child, for example teachers or older children. This group of individuals he referred to as experts. He argued that whilst two pupils may have the same mental age as each other as revealed through assessment, their capacity to achieve with instruction might be different. Thus, he linked development to potential development rather than actual development, focusing on the relationship between potential and actual ability. This relationship he viewed as the 'zone of proximal development', which can be defined as "the distance between the most difficult task a child can do alone and the most difficult task a child can do with help" (Garhart-Mooney, 2000, p.83). For learning to occur, a child should work within this zone of proximal development, and be provided with more challenging experiences. If the child does not work in the zone of proximal development, learning will not occur.

2.4.1.3 Constructivist Theory – (Bruner, 1915 -)

Bruner argues that for learning to occur, learning episodes should be structured; thereby building upon previous experiences. This suggests a child-centred approach to learning. He proposes 3 stages of development. These are summarised in table 2. 8.

Table 2.8

Bruner's Stages of Development

Age	Stage	Behaviours
0 -2	Enactive Mode	Motor responses Uses actions to represent the environment
2 – 6	Iconic Mode	Images used to stand for objects
6 -	Symbolic Mode	Symbolisation Abstract thinking

Adapted from Smith et al. (1998) p. 433

Within his theory, Bruner identified that children's stages of cognitive development is reflected through the way in which they represent their environment. Up until the age of two he suggested that children are in the enactive mode whereby representation of the environment is through actions. As children develop, between the ages of 2 – 6, they enter the iconic mode whereby images begin to be used. Post six they enter the symbolic stage whereby knowledge is developed through abstract thinking.

Bruner sees the teacher (which may include parents) as central to the learning process, identifying them as the provider of structured help, allowing pupils to use existing knowledge to build greater depth and understanding. In order to achieve this, Bruner suggests the adoption of a process known as "scaffolding". This involves the provision, by the teacher, of a structure that allows the pupils to gradually build their knowledge base through a series of related tasks. Smith et al. (1998) defined scaffolding as "a flexible and child-centred supportive strategy which supports the child in learning new things" (p.431).

Further, Bruner suggests that for this development to occur, a child must be introduced to ideas at an early age and that these ideas should be revisited progressively, and at increasing levels of difficulty for deeper understanding to be achieved. This he called the spiral curriculum. However, as Vygotsky identified in

his periods of sensitivity, Bruner also identified that children need to be in a state of readiness to learn. Thus the extent to which children are ready to learn will impact upon the learning that takes place and may also influence the way in which what is to be learnt is presented.

2.4.1.4 Links between the theories of cognitive development

The theories proposed by Piaget, Vygotsky and Bruner predominantly focus on the child as central in any learning process. In this respect they support a child-centred approach to learning and teaching. The teacher is a facilitator, providing opportunities and activities designed to encourage the child to learn through trial and error, although the level of involvement from the teacher may vary according to the level of development reached by the child.

To some extent the theories are reflected in the teaching styles predominant in primary schools, whereby learning is child focussed. Further the theories highlight the need for continuity and progression in learning, whereby previous knowledge and understanding is built upon. Of importance also, is the identification of key ages of development, specifically ages 6 and 12. Such ages coincide to some degree with the ages of commencement of schooling, also of transfer from primary to secondary school. Thus whilst it is not explicit whether such theoretical knowledge was used during the establishment of ages of transfer, they would appear to be a link between development and ages of transfer.

2.4.2 Affective Development

Affective development (also referred to as socio-emotional (Erikson, 1995) and psycho-social (Murdoch, 1996) is concerned with the development of feelings and emotions (Crain, 2000). It is associated with the way the individuals feel about themselves, which is reflected in the behaviours they exhibit. To some extent affective development follows similar patterns to those identified in the cognitive domain of development. Piaget and Inhelder (1969) highlight this further stating "The affective and social development of the child follows the same general process [of cognitive development], since the affective, social, and cognitive aspects of behaviour are in fact inseparable" (p.114). Changes reflect an ordered process, which differs between individuals, but requires all individuals to progress through the stages at some time and in the same order.

Erikson (1995) proposes eight stages of development within this domain, five of which take place between birth and adolescence. He argues that these stages reflect the ability of the individual to negotiate a series of responses to conflict, resolution of which allows movement into the next stage of development. These are summarised in table 2.9.

Table 2.9

Erikson's 1st Five Stages of Socioemotional Development

Stage	Age	Characteristics
Trust vs Mistrust	Infancy 0 – 1	Development of trust towards individuals Development of confidence
Autonomy vs Shame	Toddlerhood 1 – 3	Development of choice Experimentation linked with physical development
Initiative vs Guilt	Early childhood 3 – 6	Child becomes more loving Evidence of conflict Development moral responsibility
Accomplishment/industry vs Inferiority	Middle childhood 6 – 11	Development of competence in activities undertaken through application Potential for inferiority to develop
Identify vs Role confusion	Adolescence 11 – 16	Social comparisons against others and achievement result in identify formation

In focusing on the development of the child's feeling and emotions, and the resulting behavioural changes, affective development is associated with the development and modification of self-esteem, motivation and attitudes, and forms an important focal area during the education of children.

2.4.3 Motor Development

Haywood (1986) suggests:

> The learning and performance of motor skills is a lifelong challenge. Basic skills must be acquired early in life; this process begins with the achievement of postural control and the ability to grasp with the hands. It continues with the acquisition of locomotor skills and then manipulative skills such as throwing. During childhood, the basic skills learned

> earlier are refined and combined in order to produce complex skills. The individual continues to acquire movement sequences into adolescence as improvements are made in the ability to match motor skills to the demands of the movement tasks at hand (p.3).

Thus, motor development focuses on the acquisition, consolidation and development of basic movement skills during a child's development. These basic movement skills include for example, running, walking, jumping, rolling and stopping, which may also be referred to as gross motor skills. However, it can also include movement skills requiring a form of manipulation, for example writing, handling of objects, also referred to as fine motor skills. Models of motor development (Gallahue & Ozmun, 1995; Haywood, 1986; Thomas, 1984) suggest that during their development, children progress through a series of stages. Further that movement through these stages will depend upon their level of maturation. Age ranges are identified, during which certain skills can be developed and performed. However, motor development occurs in stages with children having to successfully complete one stage before further progress can be made. Whilst it is possible to predict the types of skills the individual should be able to perform within an age range, this may not reflect actual performance due to the individual characteristics and differences an individual brings to the context in which the skill is developed. Thus diversity in skill development becomes apparent, but follows a similar pattern.

2.4.3.1 Gallahue and Ozmun (1995)

Gallahue and Ozmun (1995) define motor development as "progressive change in motor behaviour throughout the life cycle, brought about by interaction among the requirements of the task, the biology of the individual, and the conditions of the environment" (p.3). They provide a staged model for motor development stating that basic motor skills need to be learnt and refined before progress to the next stage can be achieved. These stages are shown in table 2.10.

Table 2.10

Phases of Motor Development (Gallahue & Ozmun, 1995)

Period	Age range (years)	Skills acquired
Infancy	0 – 2	Reflexive movement
Childhood	2 – 10	Fundamental movement phase
Toddler period	2 – 3	characterised by exploration and
Early childhood	3 – 5	experimentation.
Middle / Late Childhood	6 –10	Transitional phase
Adolescence (prepubesence)		Application phase
(girls)	10 – 12	
(boys)	11 – 13	
Adolescence (postpubesence)		Lifelong utilisation phase.
(girls)	12 – 18	
(boys)	13 - 20	

Infancy involves the child responding through reflexes to the changing environment. As children experience physiological changes within their body basic skills, for example balance, develops. As a result children are more able to control themselves allowing actions to become more voluntary resulting in for example the development of skills such as walking and manipulation using hands. During the childhood period the child develops further motor skills through exploration and experimentation building upon the skills they have previously learnt. Associated with this period of development is the child's ability to run, jump, throw and catch (Murdoch, 1996) i.e. their fundamental motor skills.

As the child progresses further they enter a period Gallahue and Ozmun (1995) characterise as the transitional phase. During this period "the individual begins to combine and apply fundamental movement skills to the performance of specialised skills in sport and recreational settings" (p.88). The skills performed are similar to those of the fundamental stage but performance is more accurate and efficient.

The application period of motor development coincides with the period of cognitive development that sees children develop conceptually and hypothetically.

Consequently children begin to develop the ability to apply tactics to the activities they undertake. The complexity and accuracy of the skill develops further as the child adapts the skills they have acquired. Further, individuals begin to make choices regarding the activities they like with specialisation becoming apparent. Within this phase of development gender differences are acknowledged, specifically in respect of the biological differences between boys and girls associated with the onset of puberty, which impacts on the time at which this phase may occur.

2.4.3.2 Haywood (1986)

Haywood (1986) proposed a staged model of motor development, with mastery of basic skills being necessary before more advanced skills can be developed. Identification is made of three key stages of development, as shown in table 2.11. Movement through these stages reflects the increased efficiency and stability of the individual as a result of physical development.

Table 2.11

Summary of Stages of Development, Haywood (1986)

Period		Age Range	Skill development
Infancy		0 – 1	Involuntary / reflex actions
Childhood		1 – 8	Basic locomotion Basic skill development e.g walking, running, jumping hopping, throwing, kicking, hitting, catching
Preadolescence / Adolescence	Girls	8 / 10 – 18	Strength development, endurance, co-ordination, efficiency
	Boys	10 / 12 - 20	

2.4.3.3 Thomas (1984)

Thomas (1984) also suggests that as a child goes through the processes associated with maturation, changes to their movement patterns become evident. Such changes are associated with biological developments, for example in changes to limb length and changes to height and weight. These changes require movement patterns already developed to be modified. Thus some children, who are able to perform basic skills at a young age, then find it more difficult to perform the same

skills as they get older. Consequently there may be a decline in their overall performance. Such declines tend to be temporary and improvement is evident overtime, however they may impact on other aspects of the child's development specifically within the affective domain, resulting in changes to self-esteem, motivation and attitudes.

Thomas (1984) suggests that simple reflex actions in infancy are built upon and form more rudimentary movements as development occurs. During early childhood, these rudimentary movements develop to become fundamental motor skills, for example, running, jumping, throwing. Through adolescence into adulthood these skills are refined, resulting in the development of sport specific skills. These are summarised in table 2.12.

Table 2.12

Summary of Phases of Motor Development, Thomas (1984)

Period	Age range (years)	Skills acquired
Infancy	0 – 1	Reflexes – reaction
		Rudimentary movement
Childhood		Fundamental movement –
(girls)	1 – 8	Walking, running, jumping, hopping,
(boys)	1 – 10	throwing, catching, punting
Adolescence		
(girls)	8 – 19	Transitional motor skills
(boys)	10 – 22	Specific sports skills and dances

2.4.3.4 Summary of stages of 3 models of motor development

As with the theories of cognitive development, motor development is identified as a staged process, with the development of basic competences or fundamental motor skills, that are built upon as maturation occurs. Commonalities exist regarding the characteristics of each stage of development between the identified models. These are shown in table 2.13. Further as with cognitive and affective development, stages of development appear to link to stages evident within the current English education system.

There are commonalities within the models in respect of the age ranges at which developmental changes occur. All agree that there is a period of infancy, although Gallahue and Ozmun (1995) suggest that this period of development occurs

over a longer time frame than Thomas (1984) and Haywood (1986). Further, all three identify a development period from infancy to 10 years of age which they label as childhood. During this period, Thomas (1984) identifies differences between boys and girls. However, Haywood (1986) and Gallahue and Ozmun (1995) do not differentiate between boys and girls during this period of development. The third main period of development they all refer to as adolescence. Within this stage acknowledgement is made of differences between boys and girls reflective of the different times at which puberty occurs.

Table 2.13

Summary of the development periods identified by Thomas (1984), Haywood (1986), and Gallahue & Ozmun (1995)

Thomas (1984)		Haywood (1986)		Gallahue & Ozmun (1995)	
Period	Age range (years)	Period	Age range (years)	Period	Age range (years)
Infancy	0 – 1	Infancy	0 – 1	Infancy	0 - 2
Childhood		Childhood	1 – 8	Childhood	2 – 10
(girls)	1 – 8			Toddler period	2 – 3
(boys)	1 – 10			Early childhood	3 – 5
				Middle / Late Childhood	6 –10
Adolescence		Preadolescence / Adolescence		Adolescence (prepubesence)	
(girls)	8 – 19	(girls)	8/10 – 18	(girls)	10 – 12
(boys)	10 – 22	(boys)	10/12 - 20	(boys)	11 – 13
				(postpubesence)	
				(girls)	12 – 18
				(boys)	13 - 20

2.4.4 Links between Phases of Education, the National Curriculum and Theories and Models of Development

The theories and models of development identify development to be continuous, with knowledge and skills enhanced as a result of social interactions. Further, development and learning are staged, whereby a certain level of development is necessary before movement onto the next stage is possible. Development is individual, and therefore children progress at differing rates and this is reflected in the age ranges identified within the theories and models.

The theories and models of development have implications for children's learning and therefore for schools. The structure of schooling, particularly age of commencement and of transfer and the framework of the National Curriculum, reflect the developmental stages identified in the various theories and models. In relation to learning itself, whilst the revisiting of previous work for both cognitive and motor development is acceptable, as reflected in the theories proposed by Vygotsky and Bruner, it is only beneficial if it enhances the knowledge base of the child, requiring the child to attempt increasingly more challenging activities.

In addition to stages of development, relationships are evident between cognitive and motor development. Further, relationships are evident between the affective development of the individual and both their cognitive and motor development. Breckenridge and Vincent (1965) acknowledged that individual's who demonstrate a greater level of physical competence (reflected in their skill development) show greater self-confidence and social interaction. It is the individual's ability to interact socially that has been identified as influencing both cognitive and affective development.

Specifically within the context of physical education, Murdoch (1996) argues that the development of the child reflects the complex inter-relationships between the different domains of development. To this end she identifies five principles of development:

- That the relationship between the domains of development will influence the overall competence of the child;
- That development will occur through stages;
- That the time at which movement through these stages occurs will differ between children;
- That the time it takes a child to move through the stages will differ;
- That individual movement between domains will differ in a child.

Thus links are evident between the phases of education, the National Curriculum and the stages of human development. Figure 2.1 provides an overview of the time at which changes occur in phases of education, curriculum content and stages of development.

<table>
<tr><td>AGE</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td></tr>
<tr><td rowspan="2">PHASE OF EDUCATION</td><td colspan="6">PRIMARY EDUCATION</td><td colspan="6">SECONDARY EDUCATION</td></tr>
<tr><td colspan="5"></td><td colspan="2">MIDDLE SCHOOLS</td><td colspan="5"></td></tr>
<tr><td>KEY STAGE</td><td colspan="2">KEY STAGE 1</td><td colspan="4">KEY STAGE 2</td><td colspan="3">KEY STAGE 3</td><td colspan="3">KEY STAGE 4</td></tr>
<tr><td>CURRICULUM FOCUS FOR PHYSICAL EDUCATION</td><td colspan="2">EXPLORE
REPETITION</td><td colspan="4">CONSOLIDATION
CONSISTENCY</td><td colspan="3">REFINEMENT
ADAPTATION
SPECIFYING</td><td colspan="3">ADVANCED SKILLS</td></tr>
<tr><td>AREAS OF ACTIVITY TAUGHT</td><td colspan="2">3</td><td colspan="4">5</td><td colspan="3">4</td><td colspan="3">2</td></tr>
<tr><td>COGNITIVE DEVELOPMENT</td><td colspan="2">PRE-OPERATIONAL</td><td colspan="5">CONCRETE OPERATIONAL</td><td colspan="5">FORMAL OPERATIONAL</td></tr>
<tr><td>AFFECTIVE DEVELOPMENT</td><td></td><td colspan="5">POTENTIAL FOR INFERIORITY
DEVELOPMENT OF COMPETENCE</td><td colspan="6">SOCIAL COMPARISONS</td></tr>
<tr><td rowspan="2">MOTOR DEVELOPMENT</td><td></td><td colspan="4">TRANSITIONAL PHASE</td><td></td><td colspan="5">UTILISATION</td></tr>
<tr><td colspan="6"></td><td colspan="4">APPLICATION</td><td colspan="3"></td></tr>
</table>

Figure 2.1 Phases of education, the National Curriculum and the development of the child.

Thus it can be suggested that the National Curriculum and phases of education are inter-related, and loosely reflect the stages of development identified within the domains of development. However it must be acknowledged that due to the individual nature of development, children may not exactly fit the development structure outlined in the National Curriculum. Consequently this may impact of the learning that takes place and with it the associated attainment of the pupil.

Within the context of education, knowledge and understanding of these stages of development are necessary if teachers are to develop a greater understanding of the changes pupils experience during their education. The next section of this chapter looks at how transfer between schools may impact upon pupils, identifying some of the changes pupils may experience.

2.5 Transfer between schools

The current structure of the English education system requires pupils to change schools at least once. For most pupils transfer from primary to secondary school occurs at the age of 11. As well as a change of school at this time, pupils move from key stage 2 to key stage 3 of the National Curriculum. However some pupils change school at age 12 or 13. They therefore experience a change in key stage whilst remaining within the same school and change school within a key stage.

Research (Schachar, et al., 2002; Steed & Sudworth, 1987; Walsh, 1995) suggests that the transfer from primary to secondary school is perhaps one of the most influential periods in pupils' education. Changes in physical size and appearance, coinciding with environmental changes in terms of status, as a result of moving from being the eldest in the school to becoming the youngest, size of the school, and changes in pedagogical approaches as they move from child-centred to subject-centred approaches (OFSTED, 2002), result in many pupils experiencing anxiety or threat (Howarth & Head, 1988). Schachar, et al. (2002), looking at the impact of transfer between schools on pupils, concluded that "periods of transition in terms of the physical and social environment are indeed periods of psychological instability for people, and that these transitions affect people's development profoundly" (p.81). Differences between pupils exist, with some coping more quickly with change than others. To this extent Steed and Sudworth (1987) proposed that the movement from primary to secondary school is "a major hiatus in the educational journey of most pupils and it takes time for them to adjust to a different set of conditions" (p.24).

More specifically, research has shown that this change of school has an impact on; attainment (Doyle & Herrington, 1998; Galton, et al., 1999; QCA, 2002; Sainsbury, et al., 1998), self-esteem (Eccles, et al., 1989; Hirsch & Rapkin, 1986; McCarthy & Hoge, 1982), motivation (Bouffard & Couture, 2003; Chen, 2001) and attitudes (Anderson, et al., 2000; Coe, 1984).

Such changes reflect changes to the individual's self-system (Harter, 1983; Seidman, Allen, Lawrence Aber, Mitchell & Feinman, 1994). Harter (1983) identifies the self-system to consist of "cognitive and affective structures" (p.276). Development of the self-system is progressive occurring as a result of interactions with the environment and therefore can be seen as socially constructed. Integral to the system is the resulting behaviours exhibited by the individual. The self-system therefore comprises the affective (self-esteem), cognitive (motivation and attitudes) and behavioural (achievement / competence) domains.

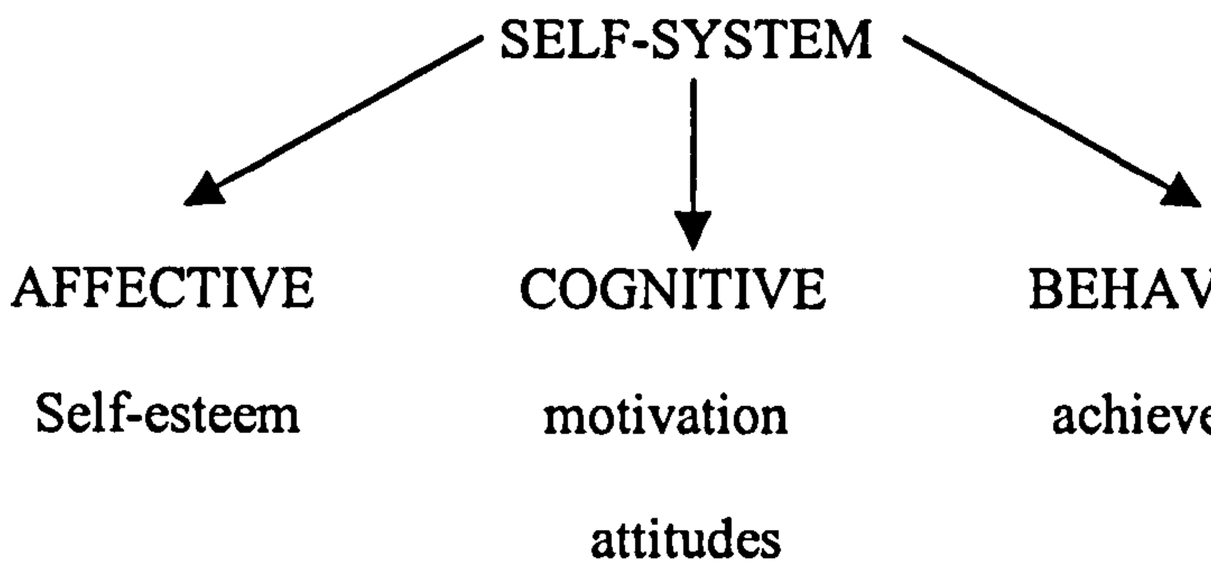

Figure 2.2 The self-system (Seidman et al., 1994)

Cognitively the model reflects an individual's competence / achievement and how they view themselves within a given situation, which may reflect their self-evaluations or evaluations of themselves against others reflecting a need for approval from those around them. Thus the concept reflects the individual's perception of himself or herself within given situations, which may impact on the motivation, attitudes and behaviours they demonstrate towards that situation. Consequently, it can be suggested that the individuals' perception of themselves becomes focal in determining their motivation, attitudes and attainment.

In identifying the self-system as socially and cognitively constructed (Harter, 1999), it can be proposed that where social change occurs, for example when changing school, changes to the self-system will also be evident. This will be a result of changes to pupils perceptions of themselves against others and the changing

environment. Eccles and Midgley (1989) provided a meta-analysis of research conducted to identify changes experienced by pupils during the move from primary to secondary school. They identify that key changes occur in pupils' achievement, self-esteem, motivation and attitudes. Reasons for such changes are identified as a change in emphasis towards competition, social comparison and self-assessment. Such changes are reflected in the departmentalisation of education, ability groupings and pedagogical approach (to include assessments, teacher control and teaching strategies), which directly opposed what pupils' had previously experienced.

The aim of the next section of the chapter is to identify more specifically the changes experienced by children during the transfer from primary to secondary school in attainment, self-esteem, self-motivation and attitudes.

2.5.1 Attainment and the importance of transfer on attainment

Attainment can be defined as "personal achievement" (Sykes, 1989) and as such is a reflection of a pupil's competence. A measure of attainment is usually obtained as a result of assessment against predetermined criteria. For physical education in the National Curriculum, a measure of attainment reflects pupils' ability to demonstrate competence across the four content areas over a range of areas of activity. Progressive attainment in physical education to some extent will reflect the stage at which the pupil is at in respect of their motor development.

According to DFEE / QCA (1999a) attainment targets reflect the "knowledge, skills and understanding that pupils of different abilities and maturities are expected to have achieved by the end of each key stage" (p.1). Table 2.4 shows the expected levels of attainment for pupils during each key stage. A description of each level of attainment can be found in appendix A.

Research (Doyle & Herrington, 1998; Galton et al, 1999; OFSTED, 2002; QCA, 2000: Sainsbury, et al. 1998) has identified a decline in attainment after transfer from primary to secondary school. Such declines are evident across curriculum subject areas. Doyle and Herrington (1998) identified declines in mathematics post transfer. Whilst their research focussed predominantly on ways of managing transfer, they reported that declines in attainment were predominantly within the region of at least one level, and further, that there was no evidence of increases in attainment. QCA (2000), reporting on a decline in attainment specifically in the core subjects on English, mathematics and science, found that

changes in attainment reflected the environmental, for example changes in school size and movement between classes, and developmental issues associated with maturation that pupils have to address when moving from primary to secondary school. Sainsbury et al. (1998), identified declines in attainment to be associated with a broadening of the curriculum experienced by pupils immediately prior to transfer from the primary school. They identified that once final assessment tasks (Standard Assessment Tasks (SATs)) had been completed pupils' experience an increased range of subject areas resulting in a change in motivation amongst pupils as they anticipate and experience a change in school, and the summer vacation. Galton et al., (1999) established changes to be associated with the adjustment of the pupils to a new environment, replication of work previously experienced in the primary classroom and time management issues as pupils adjust to the different expectations in the secondary school.

Ellis (1999) argued that a loss in momentum post transfer, reflected in lower attainment, is a result of the reluctance by secondary school staff to take on board previous achievements across curriculum subjects in the primary school. Looking at how assessment data was used on arrival at the secondary school, Ellis (1999), identified that mixed sex teaching and baseline testing during the first term within the secondary school were employed, implying that assessment data sent by the primary school was not being effectively used. However, Dunlop (1998) argues that the need for attainment data is crucial for subsequent planning. Although such attainment data is important and allows for teachers to build on what has previously been achieved, where transfer occurs differences in the way this data is used suggests that this does not always occur.

Fouracre (1993), studying the perceptions of secondary school pupils in Scotland during their transfer to secondary school, identified a tendency by secondary school staff to underestimate the capabilities of pupils, resulting in the work expected of pupils being of a lower standard than that within the primary school. To this extent pupils suggested, "that they found secondary work was rather like revision" (Fouracre, 1993, p.2). Doyle and Herrington (1998) identified that declines may be a result of the type of information exchanged between schools. This suggests that in spite of descriptions of National Curriculum levels of attainment and the information sent from primary to secondary schools, such information might not be used effectively. McCallum (1996) suggested the introduction of the National

Curriculum provided opportunity for the formalisation of the transfer of assessment material. However her research, looking at the transfer of assessment material and the ways in which such information was used within the secondary school, identified a need to ensure the adoption of a consistent approach in primary schools to both assessment and the assessment information provided for the secondary school. Common transfer documentation is now encouraged (see appendix B). Developed by DfEE (2001), the double sheet provides information regarding Key Stage 1 and 2 levels of attainment, in the form of SATs results and teacher assessments, however the focus remains with the transfer of information related to English, mathematics and science. Thus there is a requirement for more information to be given to the secondary schools by the primary schools in the core subjects of English, mathematics and science than in other subject areas. Other attainment data is provided at the discretion of the primary school.

Lenga and Ogden (2000) identified declines in attainment in religious education and more generally across subject areas. They suggested that professional and institutional issues (e.g. communication between teachers, induction processes and organisation), pupil centred issues (e.g. change in relationships, changes in teaching approaches), and teaching and learning issues (e.g. low teacher expectations) were the main causes. Ryan (2002), looking at the impact of transfer on attainment in science, suggested that dips in attainment reflected differences in curriculum structure between primary and secondary schools, a lack of transfer of learning between the two sectors as well as a lack of awareness of what each other were doing.

Thus, the consensus amongst research findings is that during the transfer from primary to secondary school attainment declines, and that this is associated with a variety of issues, including the change of school itself, changes in approaches between schools, and teacher expectations. Thus institutional, environmental, pupil centred and teaching and learning centred issues are all factors.

2.5.2 Self-esteem and the impact of transfer

The development of the 'self' is seen (Fox, 1988b) as important in enhancing the general well being of an individual. Within the field of psychology the self is viewed both as self-concept and self-esteem. Although the terms are frequently used interchangeably, there are differences between the two.

Rosenberg and Kaplan (1982) define self-concept as "the totality of the individual's thoughts and feelings with reference to himself or herself as an object" (p.2). Marsh (1993) argues that self-concept refers to "a person's self-perceptions, formed through experience and interpretations of one's environment" (p.184). Gallahue and Ozmun (1995), define self-concept as "how one views herself or himself without passing personal judgements or comparison with others" (p.344). Thus, self-concept is concerned with evaluations an individual makes about their own behaviours. In relation to physical activity and physical development, Gallahue and Ozmun (1995) suggest that self-concept is "a multidimensional construct linked to perceived physical competence throughout childhood and beyond" (p.343).

Self-concept has been identified as an umbrella term to embrace what Rosenberg and Kaplan (1982) refer to as dimensions. One such dimension is self-esteem. Coopersmith (1967) defines self-esteem as:

> the evaluation which the individual makes and customarily maintains with regard to himself: it expresses an attitude of approval or disapproval, and indicates the extent to which the individual believes himself to be capable, significant, successful, and worthy. In short, self-esteem is a personal judgement of worthiness that is expressed in the attitudes the individual holds towards himself (pp.4 – 5).

Further, Rosenberg and Kaplan (1982) suggested that self-esteem "refers to whether one accepts oneself, respects oneself, considers oneself a person of worth" (p.4). Fox (1988a) concluded "Self-esteem then becomes our perception of our own esteem and is dynamic, always in flux. It is based upon our appraisal of our past accomplishments, upon our evaluation of our present actions, and upon our perceptions of our ability to attain certain goals we have set for the future" (p.25). Gallahue and Ozmun (1995) stated that self-esteem "is the value that one attaches to his or her unique characteristics, attributes and limitations" (p.345).

The concept of self-esteem has developed over time. Coopersmith (1967) viewed self-esteem as a uni-dimensional concept made up of a single component. More recent work (Fox, 1988b; Shavelson, Hubner, & Stanton, 1976), has focussed on self-esteem being multi-dimensional, i.e. evaluations are made in respect of a variety of domains, with an individual evaluating themselves differently according to contextual and situational variables. Both Fox, (1988b) and Shavelson et al., (1976)

proposed that self-esteem can be evaluated in terms of four main domains; academic, social, emotional and physical. These domains can be broken down further, e.g. the academic domain can be broken down by subjects in the school curriculum; the physical domain can be broken down to include for example physical appearance. As such, people will differ in respect of their self-esteem towards different domains. Therefore the diversity in experience of pupils within education in respect of the differing ways in which they perceive experiences and events, results in different pupils demonstrating differing self-esteem within each sub-domain, and across subject areas.

Rosenberg, Schoenbach, Schooler and Rosenberg (1995) identified that changes in self-esteem occur over time. Individuals use reference groups against which to compare themselves, thus the development of self-esteem is a result of social comparisons. Such reference groups, in terms of education, include classmates. Harter (1990) found that evaluations against others can occur in children aged 4 – 8 years and that children's ability to make such evaluations improves after the age of 8 and develops further during adolescence and adulthood. During adolescent development a child develops rapidly in terms anatomical, physiological and physical changes. Such rapid developments, Dekel, Tenenbaum and Kudar (1996) suggest, impacts upon the individual both socially, in respect of their social interactions, and psychologically, in terms of the result of such social interactions, thereby influencing self-esteem development. Such a premise is supported by the affective development theory proposed by Erikson (1995) who identified that during adolescence social comparisons against others and achievement results in identify formation.

During the movement from primary to secondary school there are changes in reference groups, due to changes in classes, pupils not transferring to the same school and pupils being taught in subjects. Research (Hirsch & Rapkin, 1986; McCarthy & Hoge, 1982) suggests that such changes may positively or negatively impact on self-esteem.

McCarthy and Hoge (1982) suggested that changes to self-esteem are most likely to occur during adolescent than at any other period. This they associated with the possibility that "self-esteem becomes more stable and resistant to change over the adolescent years, so that the impact of peers is reduced" (p.379). Further, they

suggested that, overall, such changes were positive with increases in self-esteem evident with age, although some pupils may suffer decreases in their self-esteem.

Research by Hirsch and Rapkin (1986) looked specifically at the impact of changing school at age 11, on pupils' global self-esteem. Longitudinal data was collected from 159 pupils who completed a self-report questionnaire based on Rosenberg's self-esteem scale (Rosenberg, 1965), at the end of sixth grade (aged 11), the middle of grade 7 (aged 11 / 12) and the end of grade 7 (aged 12). Their findings demonstrated an increase in self-esteem between the middle and the end of grade 7. However no significant increase was found between the end of grade 6 and the end of grade 7. They proposed that environmental changes such as facilities and teaching styles would have a greater impact on self-esteem on pupils who changed school at age 11 when compared to pupils who did not change school at age 11.

Thus, self-esteem has been found to be unstable, and open to fluctuations, in particular as the child enters their adolescent period of development, as well as during the movement between phases of education. Alves- Martins, Peixoto, Gouveia – Pereva, Amoral, and Pedo, (2002) highlight further the fragile nature of self-esteem. Reporting research conducted on 829 pupils aged from 13 to 19 years in Portuguese schools, who completed a self-report questionnaire looking at global self-esteem in early adolescence, their findings showed variations in self-esteem during the initial transfer to secondary school. To cope with this, Alves-Martins et al. (2002) concluded that pupils adopted self-protection mechanisms, which included devaluing the activity undertaken, and the demonstration of disruptive tendencies.

Eccles et al. (1989) conducted research that looked specifically at the impact of transfer on the self-esteem of American pupils, specifically in respect of self-esteem in English, mathematics, sport and socially. They collected data four times over a two-year period, when pupils were between the ages of 10 and 11 years. Questionnaires were administered to pupils in the autumn and spring prior to and post transfer to junior high school. Thus data was collected both within an academic year and across a year change (between year 6 and year 7). Results showed gender differences between boys and girls, with boys demonstrating higher self-esteem. These differences were maintained throughout the two year period. However, it was not clear whether such differences were significant or not. Further, self-esteem declined in both boys and girls post transfer, although self-esteem recovered during

the first year within their new school. Eccles et al. (1989) suggested that reasons for these changes in self-esteem were related to four factors during transfer; a change in the importance afforded to educational situations; pupils forming their own identity; gender roles beginning to be defined; and a change in school.

Wigfield, et al. (1991), support the presence of gender differences in self-esteem. Conducting research focussing on changes to self-esteem during the transition to junior high school in American schools, their findings indicated that positive changes in self-esteem were evident in both boys and girls, with boys showing higher self-esteem than girls throughout the study.

Thus, research suggests that over time changes in pupils' self-esteem may be positive or negative, with differences evident between boys and girls. Further, a change of school also impacts on self-esteem with identified reasons for such changes being environmental changes – to include the change of school itself; social changes – to include changes in reference groups; and developmental changes – to include gender differences in respect of the onset of puberty.

2.5.3 Motivation and the impact of transfer

Within the self-system model proposed by Seidman et al. (1994) motivation is included in the cognitive domain. Gage and Berliner (1984) define motivation as "what energizes a person and what directs his/her activity" (p.372). Thus, individuals may show variations in motivation depending upon the activities they undertake. As with self-esteem, motivation can be viewed in terms of a multi-dimensional concept and situationally constructed (Bouffard & Couture, 2003; Goudas, Biddle & Fox, 1994), varying according to individual personal characteristics, cultural influences and the context of the activity. Bouffard and Couture (2003) stated that motivation is "a construct that is built out of individual learning activities and experiences, and that varies from one situation or context to another" (p.19). Consequently, within an educational context, pupils show variation in their motivation towards different curriculum subjects, depending upon their interest levels towards these subjects (Gage & Berliner, 1984). Thus, as with self-esteem, motivation towards subjects differs between individuals according to their individual preferences.

Further Gage and Berliner (1984) suggested that motivation is linked to the following concepts:

- Interest: the activity must hold some form of interest for the participant
- Need: the activity must satisfy a need within the individual.
- Value: the activity must have attached value, and therefore be seen to be beneficial
- Attitude: the activity must instil positive attitude
- Aspirations: the activity must be seen to be part of a wider plan
- Incentives: rewards must be available from the activity.

Fox and Biddle (1988a) also identify value as an influence on motivation. However, they suggested that the value of the task has to be seen by the individual as higher than the amount of effort required to fulfil the task. This, Fox and Biddle (1988a) refer to as the effort-benefit ratio. The effort-benefit ratio is therefore underpinned by the notion "that we rarely choose to persist in any kind of activity unless we perceive that it is accompanied by some type of personal reward, benefit or incentive" (Fox & Biddle, 1988a, p.79). Such a premise is reinforced by Chen (2001) who suggested:

> Motivated individuals often choose to engage in tasks for a longer time than less motivated ones do. They are willing to put more effort, both physical and cognitive, into a task. Motivated individuals demonstrate strong persistence in the task, especially when encountering difficulties. Although achievement is not a direct measure of motivation, it is a reliable indicator of motivation (p.46).

Thus the effort- benefit ratio highlights that if the benefits associated with the activity are greater than the effort required to complete the activity, then participation results. Where this is reversed, participation is less likely.

Fox and Biddle (1988a) argued that to encourage participation in physical education the intrinsic (from within the individual) benefits of the activity should be the focus, i.e. the individual is encouraged to participate in an activity for its own sake rather than the extrinsic (from external) rewards that might result. Further, they identified assessment as a de-motivator, as it is seen as an extrinsic factor.

The Achievement Goal theory, proposed by Nicholls (1984), suggests that motivation is a reflection of achievement and is viewed in regard of an individual's ability. Therefore if an individual is successful they are likely to develop a higher

level of motivation towards that activity. Within the Achievement Goal theory two distinct orientations, which focus on how ability is viewed, are identified. These are referred to as task-orientation and ego-orientation. In a task-orientated environment "ability is demonstrated when task learning and mastery are achieved and high effort is exerted. An individual's assessment of ability, therefore, is self-referenced, and success is perceived when mastery is demonstrated" (Parish & Treasure, 2003, p.174). Thus a child compares their performance against their previous performance. In contrast, in an ego-orientated environment "ability is demonstrated when one exceeds the performance of others. An individual, therefore, focuses on social comparison, and ability is demonstrated when his or her performance is perceived to exceed that of others" (Parish & Treasure, 2003, p.174).

Thus, levels of success influence motivation, with those who achieve within the subject developing higher motivation towards that subject. Within such a context, success is viewed as a result of social comparison, linking to the socioemotional theory of development proposed by Erikson (1995).

The promotion of a task-orientated climate is seen by many (e.g. Longhurst & Spink, 1987; Parish & Treasure, 2003) as most beneficial for the development of higher motivation. This is because a task-orientation is predominantly reflective of intrinsic motivation.

Ntoumanis (2001) builds upon this arguing "those with prior experience who feel and are physically competent are more likely to find PE interesting and fun" (p.236). In contrast "those who perceive that they lack physical competence usually find the PE experience meaningless, and engage in it only because it is the rule or because of fear of punishment" (Ntoumanis, 2001, p.237). Ntoumanis (2001) therefore concludes that links exist between motivation and attitudes, perceived competence and motivation, and the value associated with the activity and motivation.

Parish and Treasure (2003) demonstrated further links between motivation and activity levels. Their American based research found relationships between changes in motivation and associated activity levels. Declines in activity levels were found over time, particularly in girls. This decline coincided with a decline in motivation. Further they established a link between gender and the activities

undertaken, with activities deemed to be more masculine in their orientation producing lower levels of participation and lower motivation amongst girls.

Chen (2001), looking at motivational research in physical education, suggested that the benefits (as reflected by Fox & Biddle, 1988a) perceived by the individual as a result of participation influences their interest in the activity. Over time, Chen (2001) concluded that interest declines as pupils begin to perceive that physical education is not as important as other subjects. Bouffard and Couture (2003) reinforce this, suggesting that motivation varies according to the curriculum subject studied and the perceived importance of the information gained. Their research using Canadian pupils and looking at the subjects of Mathematics and French suggested that differences in motivation might be related to the pupils' perception of usefulness of the activities undertaken. They state motivation will be relative to "students perceptions that the knowledge acquired through the subject is relevant and that it will be useful or will benefit them, either immediately or in the future" (Bouffard & Couture, 2003, p.22). Consequently, levels of usefulness vary between individuals and subjects, although a positive relationship exists between perceived competence (how good they think they are) and perceived usefulness (how useful they think the information they are gaining is).

Self-motivation is defined as "a tendency to persist in a context lacking extrinsic reinforcement" (Biddle, Akande, Armstrong, Ashcroft, Brooke & Goudas, 1996, p.237). To this extent self-motivation can be seen as one dimension of motivation, and linked to intrinsic motivation. Whilst much motivational research has been conducted, research looking at self-motivation is less evident. However, self-motivation has been identified as a positive indicator of behavioural tendencies to persist in physical activity (Biddle et al., 1996; Merkle, L.A., Jackson, A.S., Zhang, J.J. and Dishman, R.K., 2002). However research is limited regarding changes to self-motivation over time.

Research on the impact of transfer on motivation in the core subjects of English, mathematics and science has found that transfer can have both positive and negative impacts on motivation (Galton et al., 1999, Huggins & Knight, 1997, Lenga & Ogden, 2000). Positively, the change of environment and structure in the secondary school acts as a motivator. However, reluctance by teachers in the secondary school to take into account previous experience results in pupils has a

negative impact as it results in a decline in motivation as pupils find themselves repeating work that they have previously done. Thus, individual pupils may experience either positive or negative changes to motivation during the movement from primary to secondary school.

2.5.4 Attitudes

The self-system model identified by Seidman et al. (1994) also identifies attitudinal changes within the cognitive domain. Digelidis et al. (2003) suggest attitudes are "people's perceptions, ideas or judgements concerning a specific behaviour" (p.196). Digelidis et al. (2003) and Fox and Biddle (1988b), both identify attitudes as learned behaviours. Fox and Biddle (1988b) suggest that attitudes are related to three domains; these being the affective which reflects the individual's feelings; behaviour which reflects how the individual behaves; and the cognitive domain, which reflects the individual's perceptions. These can be seen in figure 2.3. This suggests that attitudes can be associated with other domains other than the cognitive. However, as with both self-esteem and motivation, attitudes can be viewed as multi-dimensional with individuals demonstrating different attitudes according to the context in which they are.

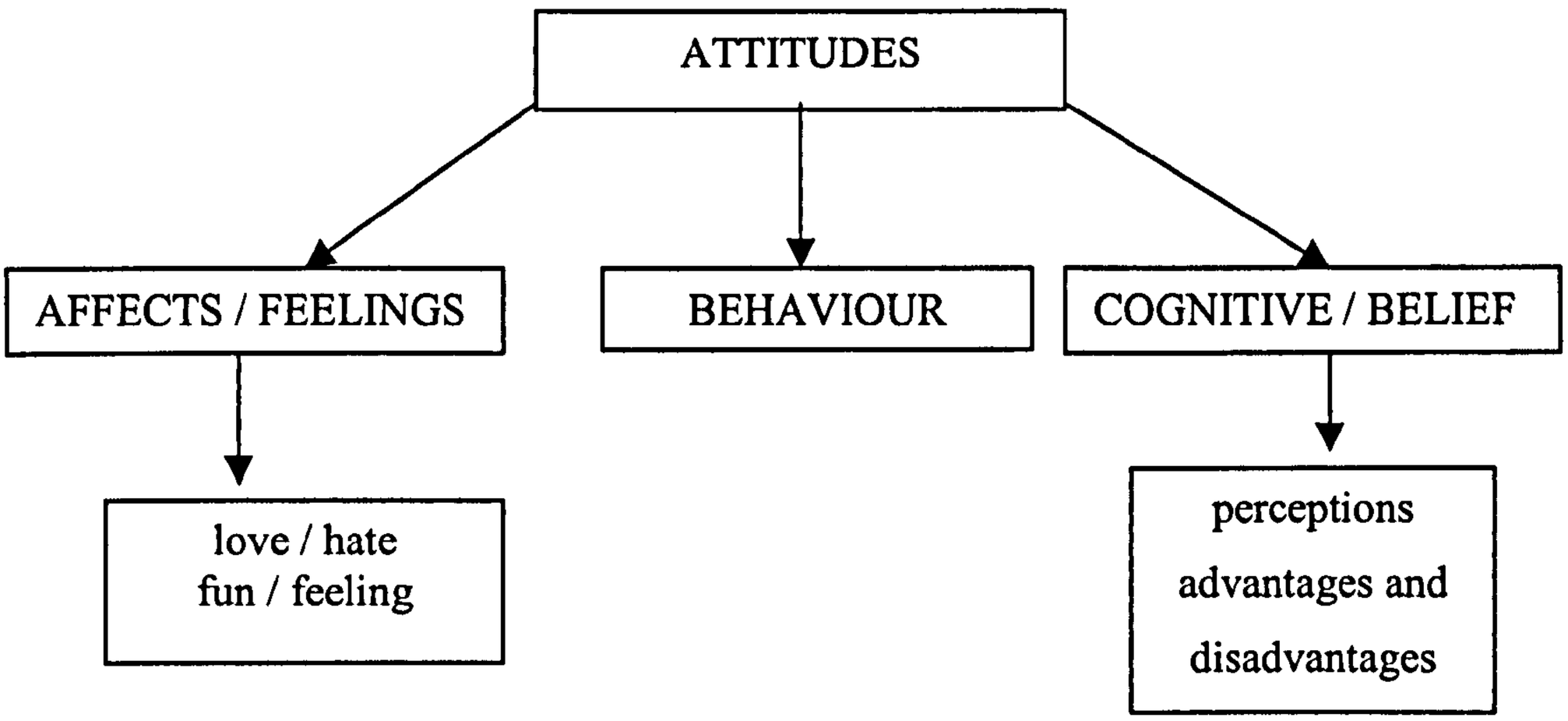

Figure 2.3 The construction of an attitude (Adapted from Fox & Biddle, 1988b).

Evidence (Chen, 2001) suggests that attitudes can be used to predict future behaviour, such that a positive attitude towards, for example physical education, results in continued participation once any compulsory requirement is removed. Further, Blackburn (2001) suggests that teacher attitudes influence pupils' attitudes,

in so far as if a teacher has a negative attitude towards an activity / subject this will be replicated to some extent in the pupils.

On transfer between phases of education, research has found (Anderson et al., 2000; Seidman et al, 1994) that changes in attitudes occur as pupils experience a change from a child to subject centred focus to learning, and a change in the social groups to which they belong.

Anderson, et al. (2000) identified that post transfer pupils demonstrated less positive attitudes towards school. This they suggested was a result of the different pedagogic approaches evident between primary and secondary school. Further, they suggested that discontinuities in terms of organisation and social interactions might also act as contributory influences to changes in attitudes at this time.

Fox and Biddle (1988b), and Shropshire, Carroll and Yim (1997), have emphasised the need to develop positive attitudes towards physical education during a pupil's school years in order that participation is maintained post compulsory schooling. Digelidis et al. (2003), conducting longitudinal research in Greece, identified that "a positive attitude towards exercise was a positive predictor of youngsters exercise behaviour" (p.196). For most children it is their experiences within the school environment that ultimately influences their decision to continue in physical activity when they leave school.

Digelidis et al. (2003) established that within Greece, the curriculum taught might not facilitate positive attitude formation, concluding that the adoption of a competitive curriculum promotes the development of negative attitudes amongst less competent pupils as a result of social comparison. Further, Coe (1984) reported "Observation and experience suggest that there might be a change in attitude, coinciding with the move from middle or primary school to secondary school, towards physical education, particularly, but not exclusively amongst girls" (p.120). This British based research identified the lack of specialist teachers within both primary and middle schools as a contributory factor, along with the limited facilities provided within some primary schools.

Fox and Biddle (1988b) identified that positive attitudes in physical education can be developed through the provision of a breadth of activities, acknowledging that repetition of activities, which may reduce this breadth, may well have a negative impact on the attitudes of the pupils. However current provision (OFSTED, 2004a, 2004b) suggests a limited curriculum, with the focus towards games activities.

More recently, Silverman and Subramanian (1999) identified that curriculum content within physical education influences attitudes towards physical activity. They suggested, "a curriculum that often is repeated with no changes to meet the diverse needs of the learner is bound to result in unfavourable student attitude" (p.114).

Shropshire et al. (1997) found that during the transfer from primary to secondary school, attitudes towards physical education become more negative. They concluded that "young children are interested and enthusiastic about physical education and ….. that a lack of interest only arises after transferring to secondary school or with the onset of adolescence" (p.24). However their research (Shropshire et al., 1997) also highlighted gender differences, suggesting that attitudinal changes are more evident in girls than boys, with the domination of team games within the school curriculum being a contributory factor. To this extent they concluded "the decline in interest in physical education by girls is already in existence prior to transferring to secondary school" (p.30). The suggestion is therefore made that changes in attitudes are a natural occurrence and are likely to occur regardless of whether a change of school is experienced.

2.5.5 Links between attainment, self-esteem, self-motivation and attitudes

Harter (1990) found that individual's who showed high attainment in an activity showed a higher degree of confidence towards that activity and were consequently more positive about themselves, resulting in higher self-esteem.

Burns and Steffenhagen (1987), Fox and Biddle (1988a) identified a link between attainment (success) and self-esteem, arguing that self-esteem is formed as a result of a success: pretension ratio. Success is associated with the attainment achieved, whilst pretensions are the negative issues associated with the task itself, for example the effort required or the environment in which the activity is undertaken. If the level of success is greater than the pretension associated with completing the task, self-esteem will be enhanced. On the other hand, pupils who are less successful perceive the pretensions to be greater than the successes with a negative impact on self-esteem. To this extent, if assessment that results in the award of attainment, is seen as a threat, it is likely that success will decline and consequently result in a decrease in self-esteem.

Ireson, Hallam, Mortimore, Hack, Clark and Plewis (1999) also established a relationship between attainment and self-esteem. Results showed that low achievers showed lower self-esteem. Further, Chubb, Fertman and Ross (1997), using longitudinal data looking at changes in adolescent self-esteem, established a strong correlation between high self-esteem and academic success, a relationship also identified by Bachman and O'Malley (1977). Their American research, looking at self-esteem and academic attainment in males in high school, concluded that whilst a strong correlation was apparent between self-esteem and attainment, it could be attributed to additional factors such as family background and the overall ability of the individual. Hirsch and Rapkin (1986) found that a positive correlation existed between competence (pupils' attainment) and self-esteem, suggesting that during the movement between schools, interactions between a range of variables, including attainment, self-esteem and attitudes occur.

The use of assessment to provide attainment has been seen as a motivational factor (Shen, 2002; Shropshire et al., 1997; Trouillard et al., 2002), with those pupils who demonstrate a high level of attainment also demonstrating higher motivation. Although assessment is identified as a motivational tool, others (Alves-Martin et al., 2002; Ames, 1992; Schachar et al., 2002) have identified it as demotivational, suggesting that the reliance of assessment upon social comparison, whereby assessment is compared with the performance of others, can be detrimental to self-esteem / self- motivation, in particular amongst those with lower attainment. Research by Alves-Martin et al. (2002), found a negative impact of assessment on pupils identified as low achievers, and that attainment has a greater impact on the self-esteem of younger adolescents than at any other time. Further, Ames (1992) argued that formal assessments could act as a demotivating factor as the inability of lower ability pupils is reinforced. Support for such a view is provided by Schachar et al. (2002), who suggested that rather than pupils experiencing a dip in attainment post transfer, they do in fact experience a change in motivational levels, which has the associated affect of reducing attainment.

Birtwistle and Brodie (1991) identified that positive attitudes towards physical education are influenced by the curriculum experience. Their British based research established a link between attitudes and attainment; positive attitudes related to positive attainment. Further, they established links between experiences and

attitudinal development, suggesting that it is pupils' experiences, in particular within the primary school, which influences their attitudes towards subsequent physical activity.

2.5.6 Summary

The transfer from primary to secondary school can be a difficult time for some pupils, with social change impacting on their self-system, most notably their attainment, self-esteem, self-motivation and attitudes. Whilst much of the research focus on changes to individual aspects of the self-system, links have been established between attainment, self-esteem, self-motivation and attitudes. Attainment reflects self-esteem and self-motivation, with pupils with higher attainment showing higher self-esteem and self-motivation. Links exist between self-esteem and self-motivation whereby if the individual feels positive about themselves within the physical environment they are likely to demonstrate higher self-motivation. Further, self-esteem and self-motivation are predictors of attitudes, whereby high self-esteem and self-motivation are reflected in more positive attitudes. What is less evident is research to demonstrate the inter-relationships between all four aspects of the self-system.

2.6 Managing the Transfer from Primary to Secondary School

Research identifies a number of factors that need to be considered and planned for during the transfer from primary to secondary school. These include changes in attainment, self-esteem and self-motivation and changes to the attitudes pupils demonstrate towards curriculum subjects as a whole and more specifically towards physical education. Lenga and Ogden (2000) summarise such issues as professional and institutional; for example the relationships between the primary and secondary schools; pupil centred, for example motivation and boredom; and teaching and learning, for example teacher expectations. Ryan (2002) is more explicit identifying issues such as a lack of awareness between primary and secondary schools as a contributory factor. Hirsch & Rapkin, (1986) identified issues of changing facilities and teaching practices as influential, an issue more recently highlighted by OFSTED (2002). What becomes evident is that an array of issues exists, which must be managed if the transfer from primary to secondary schools is to be effective. It therefore becomes important to identify mechanisms to manage transfer, thereby acting to support pupils during this transfer.

2.6.1 Models of transfer

Models of transfer have evolved to reflect a growing need to manage and support pupils during the transfer from primary to secondary school. However within such models acknowledgement is also made to the impact of changing years within the same school. To this extent Youngman (1980) argues:

> Transfer from primary to secondary education should not be considered a special feature of schooling since all educational experience involves the pupil in some kind of adjustment to new situations and demands. Nevertheless it does represent an important stage in education, if only because of the strength and variety of the influences pupils encounter during this period (p.43).

Youngman (1980) identifies the following influences during transfer:

- Situational: the characteristics of the school – e.g. changes in size of school, and organisation within it.
- Biographic: the pupils involved in the transition – e.g. age, gender.
- Intellectual: the ability and achievement of the pupils.
- Dispositional: psychological variables such as self-esteem and motivation and attitudes.

Such influences are further highlighted by Derricott (1987), who identifies the adjustments made by pupils during transfer between primary and secondary school as related to:

- changes in the size of the organisations (with secondary schools being much larger than primary schools);
- the introduction of specialist teachers (contrasting with the single teacher most pupils would have experienced in the primary school); and
- structural changes (including spending more time at school than they may have done in their primary school, as well as having a more structured timetable where movement around the school is an expectation contrasting with primary schools where the majority of lessons are taught in the same classroom).

In identifying such issues he proposes a model of transition (see figure 2.4), which he suggests can be viewed as one way of managing the transition and thereby supporting pupils during this period.

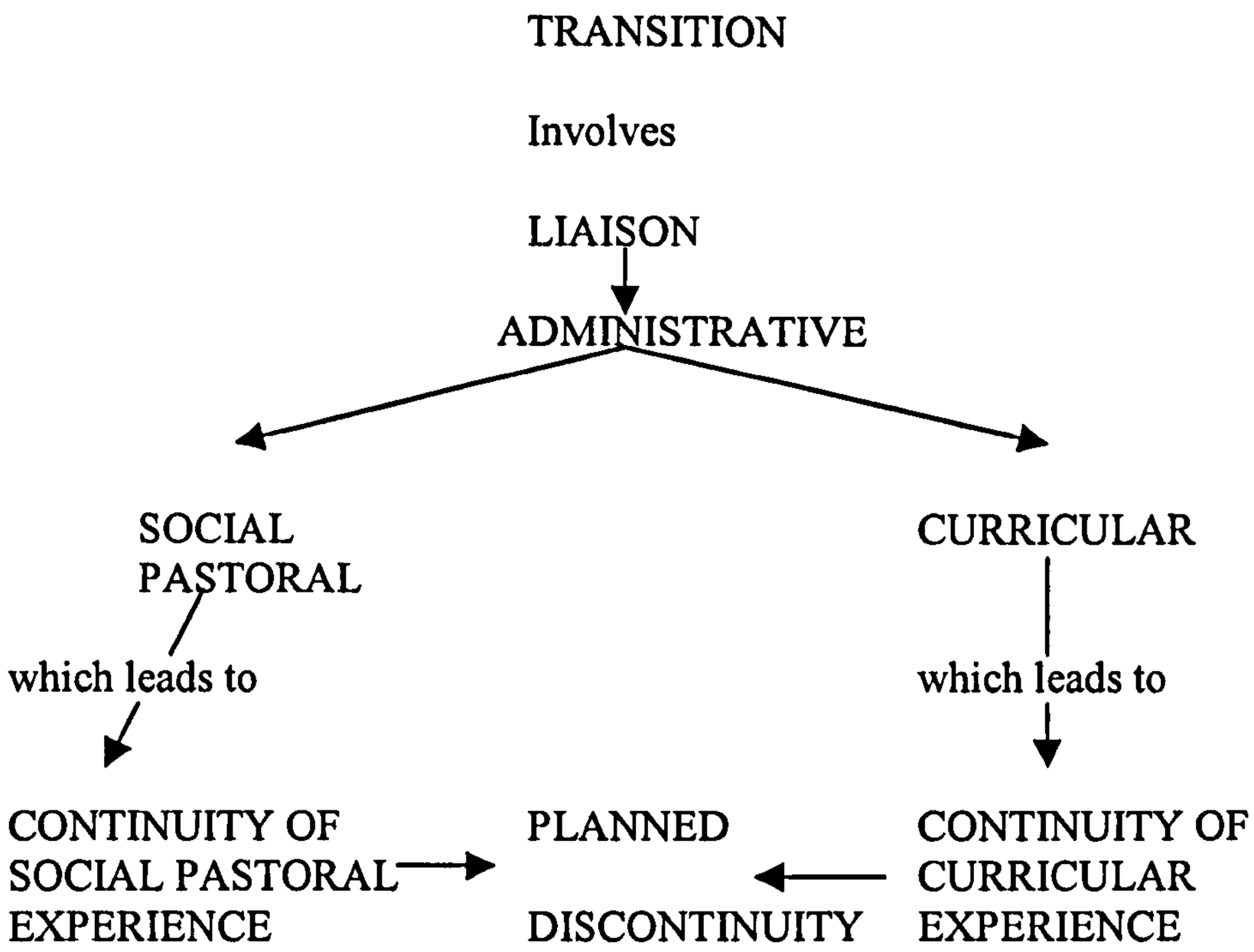

Figure 2.4 Model of Transition (Derricott, 1987, p.156).

Specifically within the model, three areas are identified as involved in the effective management of pupils transfer. These areas are summarised as administrative, social / pastoral and curricular. The administrative area focuses on the two-way transmission of information between primary and secondary schools. Social pastoral looks to manage pupils' emotional transfer, with curricular liaison looking to manage the learning experience of pupils, specifically in terms of curriculum content and teaching approach.

More recently Galton et al. (1999) have proposed a five dimensional model of transfer offering proposed ways of managing the transfer. These dimensions they identify as:

- Managerial: e.g. administrative tasks, meetings between schools
- Managing Learning: e.g. induction programmes within the secondary school
- Social and Personal: e.g. to lessen the stresses and anxiety associated with transfer
- Pedagogy: e.g. the development of common skills
- Curriculum Continuity: e.g. the development of curriculum content.

Three common themes / foci (curriculum, social / pastoral and organisational) emerge from the three models identified (Youngman, 1980; Derricott, 1987; Galton et al., 1999). These are summarised in table 2.14.

Table 2.14

Models of Transfer

Common Focus	Youngman (1980)	Derricott (1987)	Galton et al.(1999)
Curriculum	Intellectual	Curricular	Managing Learning Pedagogy Curriculum Continuity
Social Pastoral	Biographic Dispositional	Social Pastoral	Social Personal
Organisational	Situational	Administrative	Managerial

Central to all three models is the need to focus on the changing needs of the child during the transfer from primary to secondary school. More specifically they focus on a need to look at academic, e.g. curriculum content and pedagogic approaches, and social / pastoral issues, e.g. the social, emotional and affective development of the child. In order for this to be achieved administrative and organisational issues, such as transfer of information between schools and teachers also need to be reviewed and addressed. What emerges is a need, as identified within the model of transfer proposed by Derricott (1987), to develop liaison activities between schools involved in the transfer process.

Reference to the theories / models of cognitive development (e.g. Piaget, 1898 – 1980; Vygotsky, 1896 – 1934; Bruner, 1915 -), affective development (e.g. Erikson, 1995), and motor development (e.g. Gallahue & Ozmun, 1995; Haywood, 1986; and Thomas, 1984), identify a need for new learning to build upon previous experiences. Implied is a need to promote continuity and progression within the three domains of development (cognitive, affective and motor) as children mature and develop. Linking this to the models of transfer, there is a need to establish links

between schools involved in the transfer process in order that prior learning can be build upon in a progressive manner.

However, research evidence suggests that during the movement from primary to secondary school changes occur in attainment, self-esteem, motivation and attitudes, and that these may be to some extent associated with differences between primary and secondary schools. Such a point reinforces the models of transfer identified, demonstrating a need to manage change between primary and secondary schools efficiently and effectively. More importantly it identifies a need to look at both academic and social / pastoral continuity.

It therefore becomes necessary to define what is explicitly meant by continuity and progression, identify how continuity and progression relate to academic and social / pastoral change and to identify strategies that can be employed to support pupils during transfer. Further, identification needs to be made as to why the management of transfer may not be as effective as it might.

2.6.2 Continuity and progression

The Schools Council (1972) suggested "Continuity implies making assumptions about what has gone before and about what has yet to come, preferably in concert with teachers responsible for the earlier and later stages of schooling, and then decoding what may best be done in the middle years" (p.18 – 19). The Department of Education and Science (DES) (1990) suggested "Continuity refers to the nature of the curriculum experienced by children as they transfer from one setting to another" (p.13). Further, OFSTED (2002) stated "Good continuity in learning means that pupils should not repeat what they have already learned or have to attempt things that are beyond them" (p.6). The definitions therefore imply that continuity focuses on the curriculum taught to pupils.

Progression has been defined as "the sequence built into children's learning through curriculum policies and schemes of work so that later learning builds on knowledge, skills, understandings and attitudes learned previously" (DES, 1990, p.1). Further, Wood and Bennett (1999) suggested "progression is an issue of content, and is based on the structures of the subjects with children progressing from initial to more mature forms of knowledge, skills and understanding" (p.13).

Progression therefore focuses on learning as a progressive process, whereby the child experiences progressively more challenging activities as their learning base develops.

Both continuity and progression therefore focus on what pupils are taught, continuity focuses on how the curriculum is taught, how it is structured and the teaching strategies and styles employed, whereas progression focuses on the knowledge acquired and the resulting learning achieved. Thus a relationship exists between the two concepts suggesting the curriculum experienced by pupils and the way they are taught needs to build upon previous knowledge, as highlighted within the theories and models of development. To this extent DES (1990) suggested "Continuity occurs when there is an acceptable match of curriculum and approach, allowing appropriate progression in children's learning" (p.13).

Thus continuity and progression are not new concepts. The introduction of the National Curriculum has, as one its aims, the promotion of continuity and progression within education. This is based on the premise that continuity and progression are important if pupils are to experience an education where previous knowledge and understanding is built upon progressively. DES (1985) suggested that the National Curriculum would "help children's progression within and between primary and secondary education and will help secure the continuity and coherence which is too often lacking in what they are taught" (p.4). This viewpoint was reinforced by Schools Curriculum Assessment Authority (1996) who indicated, "The National Curriculum framework and its associated arrangements are designed to promote continuity in the curriculum and in pupils' progress within and between key stages in all subjects" (p.4). Thus it is suggested that there is a need for continuity and progression to be promoted throughout the education of the child, and specifically during the transfer from primary to secondary school.

What emerges from definitions is a focus on the need to promote continuity and progression in learning and as such this relates to the need to promote academic or curricular continuity. What is less evident is the need to promote social / pastoral continuity particularly during the transfer from primary to secondary school.

Derricott (1987), Galton et al. (1999), and Youngman (1980) identify issues and adjustments made by pupils during movement between schools arguing for a need to promote social / pastoral continuity. Tabor (1993) identifies pupil concerns during a change of school focus around social factors. Such a premise builds upon

previous research (Measor & Wood, 1984), which suggested "pupils undergo considerable personal change during the transition," (p.161 – 162).

However, Measor and Wood (1984) argue that in relation to socialization "it would be a mistake to aim for an entirely smooth, continuous transition" (p.170), suggesting that the stresses associated with a change of school are in fact developmental in themselves. Such suggestions contradict the premise that continuity and progression are beneficial, suggesting a need for discontinuity to also occur. Derricott (1987) argues that the promotion of continuity and progression is based on assumptions rather than a theoretical platform suggesting "the notion of continuity between stages received legitimation from a national report of the Central Advisory Committee [the Plowden report (1967)] and from a major Schools Council project [Education in the middle years (1972)]" (p.5). Galton et al. (1999) argue that whilst continuity is important specifically in respect of curriculum content, "there is also a case for knowing when 'discontinuity' is important – for instance to mark pupils' move to a new stage in their education" (Galton et al., 1999, p.29). Carr (2003), looking at educational theory and practise, argues that the mismatch in pedagogical approaches between the perceived child-centred, progressive primary school and the subject-centred, traditional secondary school promote discontinuities that are beneficial to the individuals who experience them.

Derricott (1987) identifies two forms of discontinuity, which he refers to as planned and unplanned. Planned discontinuity refers to "deliberate change in practice with the intention of stimulating growth and development" (Derricott, 1987, p.156). In relation to curriculum continuity between primary and secondary school he argues that by introducing pupils to specialist teaching on transfer to secondary school there is "planned discontinuity", whereby pupils are exposed to a formalisation of subject content and delivery. This contrasts with unplanned discontinuity, which Derricott (1987) defines as "the drift into random, unrelated activities" (p.156). Thus by the nature of the differences in established practices within primary and secondary school, the presence of planned discontinuity is to be expected. Further, to some extent, it is feasible that planned discontinuity, in the form of changing practices, and continuity, in the form of the curriculum taught, can be present at the same time. Thus discontinuity, when formalised through planning, may have a beneficial impact on pupils during their transition from primary to secondary school. Williams and Howley (1989) identified "that for some

pupils it is a positive advantage to have discontinuity because they thrive on a total change of pattern" (p.62).

More recently, Galton, Gray and Rudduck (2003) suggest that the drive towards continuity is in fact impacting on the discontinuity deemed necessary during the development of the child. They argue, "Schools need to review the *balance* of continuities and discontinuities around the transfer experience, bearing in mind that, for pupils, discontinuity marks a new and important stage in their school careers" (Galton et al., 2003, p.v).

Research (Galton et al., 1999; Measor & Wood, 1984; Williams & Howley, 1989) therefore suggests that whilst there is a need to promote continuity and progression during the education process, in order that prior knowledge is acknowledged and built upon, periods of discontinuity are also necessary if pupils are to develop further although progression is a pre-requisite. To this extent Measor and Wood (1984) conclude "pupil transfer should be neither a wholly 'continuous process' nor wholly 'sharp break' but a bit of each" (p.171). Further, Blyth and Derricott (1985) concluded that discontinuity will occur naturally in respect of the development of the child, and as such there is no perfect model.

Thus continuity / discontinuity and progression are important elements during education. Evidence would suggest that the promotion of continuity and progression may be more beneficial for curriculum issues, for example in terms of curriculum content, rather than social / pastoral issues. However, it is important to identify strategies currently employed by schools to support the transfer from primary to secondary school.

2.6.3 Strategies for supporting transfer

In supporting transfer, there is a need, as reflected in the models of transfer previously identified, to develop opportunity for both curricular and social / pastoral links between primary feeder schools and the secondary schools to which pupils transfer. Simpson and Goulder (1998) looking at transition arrangement in Scottish schools concluded that liaison activities were "a vital component in the provision of continuity in pupils' experiences, but one which was complex and associated with difficulties" (p.16). The Inner London Education Authority (ILEA) (1984) identify the aim of liaison between primary and secondary school as;

to ease the transition for pupils transferring. Within this, however, it may be useful to make distinction between short – and long-term objectives.

The short-term objectives (involving visits and the passing on of information about pupils) are concerned with meeting the needs of individual children about to transfer. The longer-term aims involve establishing curriculum links, and increasing primary and secondary teachers' awareness of the teaching methods and learning processes in each other's schools (p.5)

The Plowden Report (CACE, 1967) identified key recommendations to support transfer and can be summarised as below:

- Meetings between staff and parents should be arranged;
- The initial and in-service training of teachers should overlap more than one stage of education;
- There should be a variety of contacts between teachers in successive stages of education;
- Local education authorities should close schools for one day to arrange conferences for teachers, when there is evidence of lack of contact between those in successive stages;
- Authorities should call area conferences of teachers to consider the information passed on within the primary stage and from primary to secondary schools and the use made of it;
- There should be a detailed folder on each child which could provide a basis for a regular review with children's parents of their progress;
- All children should make at least one visit to their new school in the term before they transfer;
- All secondary schools should make arrangements to meet the parents of new entrants;
- In allocating staff, heads should try to avoid giving responsibility to a weak member of staff for children adjusting to a new school;
- Discussions should be held between primary and secondary teachers to avoid overlap in such matters as text books and to discuss pupils' records. (CACE, 1967, pp.165 – 166).

Building on from such recommendations, the Birmingham Education Development Centre (BEDC) published the Neal Report (1975), which looked at continuity in education. They identified a need for discussion to take place between schools to support the transfer process, concluding "discussion is essential both to establish a common curriculum and common teaching methods. Without this it is impossible for teachers to help each other and consequently their pupils" (p.14). Further, they identified key requirement as;

- Prior to transfer visits should be made by the secondary school headteacher to primary schools to meet pupils, collect personal information;
- Prior to transfer both pupils transferring and their parents should visit the secondary school;
- First day arrangements for pupils transferring may start at a different time to the remainder of the school, and should include an introduction to the school.

More recent research (Galton et al., 2003) has identified strategies which can be used within schools as:

- Use of Bridging Units;
- Visits by staff to schools;
- Exchange of staff between primary and secondary schools;
- Provision of summer schools;
- Extended induction programmes.

Similar recommendations and strategies are identifiable over the past 4 decades. Current provision within the National Curriculum in respect of the development of schemes of work that bridge across the transfer period and the requirement of students undertaking initial teacher education to have knowledge and understanding of the curriculum prior and post the phases of education for which they are trained, offer continued opportunities to enhance knowledge and understanding of how liaison between colleagues within education can support pupils during transfer.

However, whilst strategies are evident to promote links between primary and secondary schools and thus support pupils during transfer, their effectiveness is less evident. Research (DES, 1985; Ellis, 1999; Galton et al., 1999; Jones & Jones 1993; McCallum, 1996; OFSTED, 2002; Williams & Howley, 1989) identify a pastoral rather than curricular focus to transfer. DES (1985) stated schools focussed on the

"pastoral welfare of pupils than in achieving curricular continuity" (p.50), a premise supported by Ellis (1999) who stated, "The main focus was on pastoral issues punctuated with some academic demonstration lessons and visits to schools" (p.45). Further Jones and Jones (1993) concluded "There is a suspicion held by many primary teachers that at present data transmitted goes straight into the PSE [personal and social education] system and many heads of department do not look at it" (p.47). It therefore becomes necessary to establish reasons why the management of transfer may not be as effective as it might.

2.6.4 Constraints to Transfer and their Impact

Research (Capel, Zwozdiak-Myers & Lawrence, 2003; Ellis, 1999; Gorwood, 1983; Lance, 1994; National Primary Centre, 1994; Schagen & Kerr, 1999; Simpson & Goulder, 1998; Simpson, Goulder & Tuson, 1995; Stillman & Maychell, 1984; Walsh, 1995) suggests that there are a number of constraints that may restrict the effectiveness of links between primary and secondary schools during the transfer of pupils. These have been identified as time constraints, professional mistrust, the number of feeder schools from which the secondary school received pupils, financial constraints and the location of the school.

One of the main constraints to liaison between primary and secondary schools has been identified as time (Capel et al., 2003; Doyle & Herrington, 1998; Featonby, 1998; Jarman, 1997; Lance, 1994; Simpson & Goulder, 1998; Simpson et al., 1995). Capel et al. (2003) conducted research looking at the liaison activities currently practiced between primary and secondary schools in five LEAs. Findings indicated that time was the major constraint to the development and maintenance of liaison activities with other factors to include curriculum issues, meetings, documentation and staffing issues also identified. Thus, opportunities for staff to meet and liaise are limited due to a lack of a time provided for such meeting to take place. Williams and Howley (1989) concluded that this lack of opportunity for discussion to take place between schools and teaching staff demonstrated "that schools had been more successful at transfer in smoothing the way for the pastoral welfare of pupils than in achieving curriculum continuity" (p.73).

Additional research (Ellis, 1999; Galton, Morrison & Pell, 2000; Lance, 1994; National Primary Centre, 1994; Schagen & Kerr, 1999), has suggested that a lack of unity exists between primary and secondary schools resulting in evidence of

divisions between the two phases of education. To this extent, Lance (1994) stated, "Teacher's do not automatically refer to their pupil's case records when teaching them for the first time in the same way that doctors are trained to do. Teacher's suspect their colleagues' judgements and prefer to rely on their own diagnosis" (p.26). MaCallum (1996) suggests that although information is transferred that it is used for pastoral rather than academic purposes. Further Schagen and Kerr (1999) identified "Primary teachers felt – with some justifications – that secondary colleagues were basing their views on outdated stereotypes of primary education" (p.87).

Stillman and Maychell (1984) and Galton et al. (2000) identified that lack of trust between primary and secondary colleagues is a focal issue, resulting in the adoption in many cases of a 'fresh start' approach, whereby previous experiences are not acknowledged or built upon. One of the main consequences of this mistrust would appear to be the limited use of assessment material provided by primary schools (Lance, 1994; Simpson & Goulder, 1998). As a result, the research (Lance, 1994; Simpson & Goulder, 1998) identified reluctance by primary school teachers to provide information they felt would not be used. Simpson and Goulder (1998) identified that this 'fresh start' approach was still evident, with staff in secondary schools disregarding information regarding pupils' progress, preferring to make their own judgements. Further Lance (1994) highlighted "a need to tackle the mistrust and disrespect which exists across the divide between people who, after all, are members of the same profession" (p.46). However, the adoption of a 'fresh start' approach may also be a reflection of time constraints previously identified, whereby teaching staff are limited in the time they have available to review and implement the information received.

A further limitation during the transfer between primary and secondary school relates to the number of primary schools from which the secondary school receives pupils (Gorwood, 1983; ILEA, 1984; SCAA, 1996), and the location of the school (Walsh, 1995). The 1998 Education Act established a change to the practicalities of moving from primary to secondary schools, by allowing parents to choose the school that their child would attend. Consequently there has been an increase in the number of primary schools from whom secondary schools may receive pupils. Prior to the implementation of the 1998 Act, The National Primary Centre (1994) had already identified that a change in policy toward open enrolment

would increase the enormity of the task already faced by secondary schools in respect of establishing meaningful relationships with their feeder schools.

Thus, whilst continuity and progression are seen as important within education, the constraints to their promotion, as identified by previous research, appears to question the extent to which current provision is effective. This raises questions regarding what changes can be made to ensure that movement between schools is managed effectively in regard of both curricular and social / pastoral issues.

2.7 Summary

The development of the English education system has resulted in the establishment of two distinct phases, primary and secondary schools. Movement between them is a natural occurrence although a number of changes regarding the time at which this transfer occurs have taken place. Within this system, a National Curriculum provides detail regarding curriculum content, the attainment pupils are expected to achieve at defined stages, and continuity of the curriculum to allow for progression of pupils learning.

Theories of cognitive, affective and motor development suggest that stages of development roughly coincide with the phases of schooling and the key stages of the National Curriculum. They also identify a need to build upon previous knowledge and understanding for learning to occur. Research (Derricott, 1987; Galton et al., 1999; Howarth & Head, 1988) suggests that the period at which progressive development of knowledge and understanding is most likely to be threatened is during the movement from primary to secondary schools. Further, research indicates that during movement from primary to secondary school changes are evident in the attainment, self-esteem, motivation and attitudes pupils demonstrate. Such changes can be both positive and negative, in different subjects and for different pupils. Reasons for these changes in attainment, self-esteem, motivation and attitudes have been identified as differences in the organisation and structure of primary and secondary schools, and the teaching approaches adopted within primary and secondary schools, both of which may result in a disruption in building on previous knowledge and understanding.

What emerges is a need to support pupils during compulsory education both academically and pastorally, and particularly during the transfer from primary to secondary school. Thus, throughout education continuity and progression have been

identified as important issues. Disruption to continuity and progression is most likely during the transfer from primary to secondary school, therefore a means of maintaining continuity and progression at this time is important. Models of transfer have evolved that highlight a need to promote both pastoral and curriculum links. Suggested strategies for supporting transfer include meetings between primary and secondary schools regarding curriculum content and attainment, and provision of opportunities for pupils transferring to visit the secondary school. Post transfer, an induction programme provides further support opportunities. However constraints to the establishment of relationships / links between schools have been identified as including time, professional mistrust and the number of feeder schools from which pupils are received.

2.8 Purpose of the research

Whilst research has been undertaken into the transfer of pupils between the phases of education, it has predominantly focused on the core curriculum subjects of English, mathematics and science. Further, within the body of research, attention has focused predominantly on changes in attainment. There is therefore a lack of evidence regarding the impact of changing school on physical education specifically within the context of attainment, self-esteem, self-motivation and attitudes. Further, there is limited research regarding gender differences in physical education, in particular during transfer. The age at which transfer from primary to secondary school occurs is a further area where research is limited.

Much of the previous research conducted has provided cross-sectional data regarding the impact of transfer. Chubb et al. (1997) identified the need for more longitudinal studies to look at changes particularly over a longer period of time.

The purpose of this research was therefore to identify any changes in attainment, self-esteem, self-motivation and attitudes in physical education between the end of year 6 and the beginning of year 8 (during the transfer from primary to secondary school), and to establish any differences between boys and girls, the age at which transfer occurred and the secondary school attended. Consideration was also given to the promotion of continuity and progression between schools.

The specific research question addressed was:

What changes occur to attainment, self-esteem, self-motivation and attitudes in physical education between the end of year 6 and the beginning of year 8 and are there any differences between boys and

girls, the age at which transfer occurs or between the secondary school attended?

From this research question the following hypothesis were proposed:

Hypothesis 1

There will be a significant increase in attainment, self-esteem and self-motivation, between the end of year 6 and the beginning of year 8.

Null Hypothesis 1

There will be no difference in attainment, self-esteem and self-motivation, between the end of year 6 and the beginning of year 8.

Hypothesis 2

Boys will have significantly higher attainment, self-esteem and self-motivation than girls.

Null Hypothesis 2

There will be no difference in attainment, self-esteem and self-motivation between boys and girls.

Hypothesis 3

Pupils who change school at the end of year 6 will show significantly lower attainment, self-esteem and self-motivation when compared with pupils who change school at the end of year 7.

Null Hypothesis 3

There will be no difference in attainment, self-esteem and self-motivation between pupils who change school at the end of year 6 compared with pupils who change school at the end of year 7.

Hypothesis 4

Pupils who attend different secondary schools will have significantly different attainment, self-esteem and self-motivation.

Null Hypothesis 4

There will be no difference in attainment, self-esteem and self-motivation between pupils who attend different secondary schools.

Hypothesis 5

There will be positive relationships between attainment and self-esteem, attainment and self-motivation and self-esteem and self-motivation.

Null Hypothesis 5

There will be no relationships between attainment and self-esteem, attainment and self-motivation and self-esteem and self-motivation.

Hypothesis 6

Attitudes to physical education will be significantly more positive in the primary school than the secondary school, and for boys than girls.

Null Hypothesis 6

There will be no difference in attitudes towards physical education between primary and secondary school and between boys and girls.

Chapter 3: Methodology and Research Approach

3.1 Introduction

In selecting an appropriate methodology, Bell (1991) stated, "The approach adopted and the methods of data collection selected will depend on the nature of the enquiry and the type of information required" (p.4). The aim of this chapter is to provide an overview of the methodology, research approach and data analysis techniques used in this study.

The chapter comprises seven sub-sections.

3.2 Sample selection

3.3 Types of research

3.4 Research Methods that were appropriate for the aims of the study

3.5 Research Methods used in the study

3.6 Instruments and procedures used in the Pilot Study, and changes necessary prior to the completion of the main study.

3.7 Instruments and procedures used in the Main Study

3.8 Data analysis

The first part of the chapter looks at the subjects to be involved in the study.

3.2 Sample selection

Cohen, Manion and Morrison (2000), Frankfort-Nachmais and Nachmais (1992), May (1993), Silverman (2001) and Thomas and Nelson (2001) have identified a range of sampling techniques that can be employed. These are summarised in Table 3.1. In this study there were two sample groups to be selected; schools and teaching staff to be involved in the study, and pupils.

3.2.1 Selection of schools and teaching staff for the study

Purposive sampling was used to select the schools to be used in the study because, as Silverman (2001) stated, this "allows us to choose a case because it illustrates some feature or process in which we are interested" (p.104). In this case it allowed selection of schools in which pupils transferred from primary to secondary school at the end of year 6 (age 11) and from combined (schools catering for pupils between the ages of 5 – 12) to secondary school at the end of year 7 (age 12).

Table 3.1

Sampling Techniques that can be used

Simple random sampling:	All members of a population have an equal chance of being included in the sample. A list of the whole population is required. A random numbers table is used to select the sample subjects. This technique gives a representative sample, but may not always be practical in terms of the information about the whole population that is required for it to be conducted effectively.
Systematic random sampling:	Involves a systematic selection of subjects from a population list. The researcher selects every nth item to be used in the study. Such a technique is beneficial when large samples are required.
Stratified random sampling:	The population is divided, or stratified, into groups of subjects of similar characteristics, e.g. male and female. Subjects are then randomly selected from these groups.
Cluster (area) random sampling:	"Cluster sampling involves first selecting larger groupings, called clusters, and then selecting the sampling units from the clusters" (Frankfort-Nachmias & Nachmias, 1992, p.181). Selection from the clusters is random. The technique is usually used when the population to be sampled is dispersed. When using this technique there is a need to ensure that a representative sample is maintained and that account is taken of any additional social or cultural differences that may exist, for example location or ethnicity.
Convenience sampling:	Also referred to as accidental sampling. This technique involves the use of volunteers or individuals most accessible to the researcher, for example surveys completed on the street or the use of students. Whilst this is effective in terms of access to subjects it is unlikely to give a representative view.
Purposive sampling:	The sample is selected to reflect the specific needs of the study. Silverman (2001) suggests that this method "allows us to choose a case because it illustrates some feature or process in which we are interested" (p.104).
Quota sampling:	Quota sampling "attempts to approximate or represent the population characteristics by dividing the samples along dimensions" (May, 1993, p.71). This technique is similar in design to purposive sampling, whereby subjects are selected specifically for the needs of the study being undertaken.
Dimensional sampling:	A refinement of quota sampling. When using this method areas of interest are identified and a subject selected for each area.
Snowball sampling:	A small sample of subjects is selected based on specific criteria identified by the researcher. These subjects are then used to select other similar subjects.

Four secondary schools and eight primary / combined schools from three Local Education Authorities (LEA's) were selected to take part in the research. In two of the LEA's, pupils transferred from primary to secondary school at the end of Key Stage 2 (end of year 6, aged 11) (*LEA A and C)* in the third LEA pupils transferred from combined to secondary school during Key Stage 3 (end of year 7, aged 12) *(LEA B).*

Following consultation with the LEA advisor, two secondary schools from LEA A were approached. These schools were School A1, a sports college, and school A2, a comprehensive school. Following initial contact via telephone, a

meeting was held with the head of the physical education department at each school to confirm their willingness to be involved for the duration of the study. Following consent, the head of the physical education department was asked to identify the primary schools from which they received the largest number of pupils. Primary schools were therefore selected because they sent the largest number of pupils to the secondary school.

School A1 identified 4 primary schools, and school A2 identified 1 school. Following initial contact via telephone, visits were arranged to the primary schools that said they were willing to be involved to explain the study and further confirm their willingness to participate in the research. All 5 schools agreed to participate in the study.

School B3 from LEA B, a sports college, was selected through local knowledge, as it received pupils from its attached combined schools at the beginning of year 8. Initial contact was made via telephone with a follow up meeting held with the head of the physical education department to confirm their willingness to be involved for the duration of the study. Following identification by the head of the physical education department of those combined schools from which they received the largest number of pupils, 3 feeder combined schools were identified as potential subject schools. Following initial telephone contact 2 of the schools did not want to participate, the other school was visited to explain the study and to confirm a willingness to take part in the research.

School C4 from LEA C was identified following consultation with the head teacher at one of its primary feeder schools, which was known to the researcher. The secondary school was selected due to the large numbers of pupils that transferred from the primary school. Following initial telephone contact a meeting was held with the head of physical education in the secondary school to explain the outline of the study. Following agreement by the secondary school to be included in the project, further primary schools that transferred a large number of pupils to the school were identified. From these primary schools, one expressed a willingness to be involved. A follow up visit was arranged to explain the purpose of the study and to confirm willingness to be involved in the research. A summary of the schools that agreed to be involved in the study is shown in figure 3.1. Tables 3.2 and 3.3 provide further details of these schools.

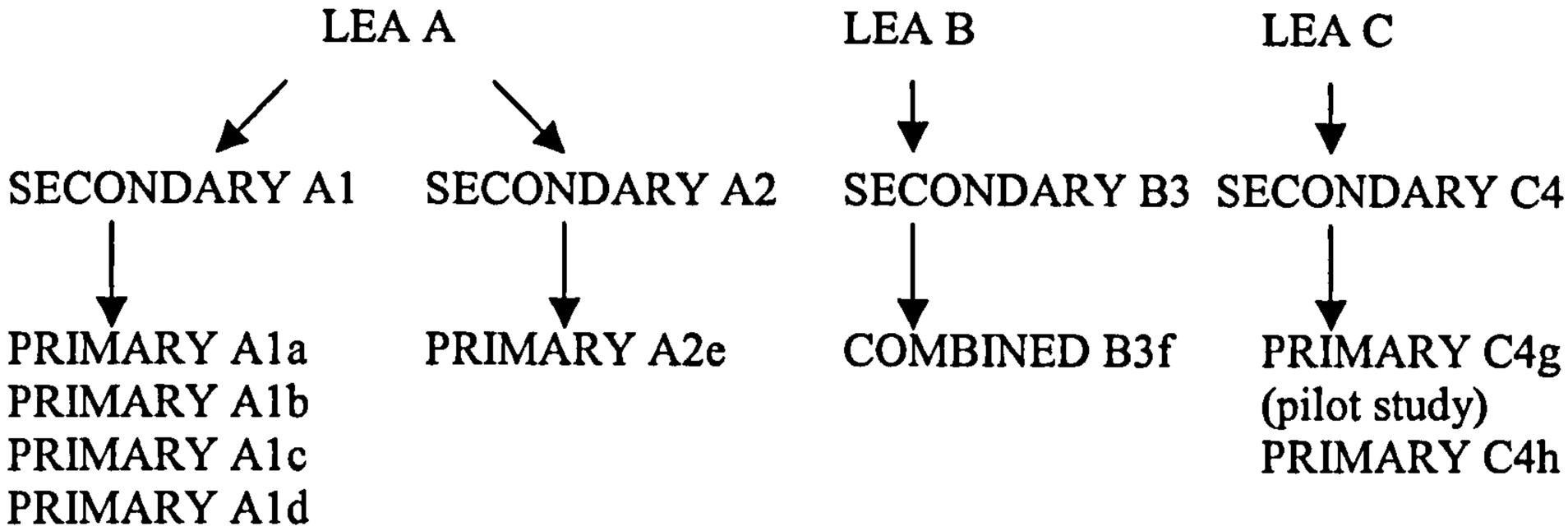

Figure 3.1 Summary of schools selected to take part in the study.

Within primary / combined schools, selection of the teachers to be involved in the study was based upon whether they taught the classes involved in the research. Therefore the class teacher was recruited, although in some schools this was also the member of staff with responsibility for physical education within the school. In secondary schools the head of the physical education department and / or the member of staff with specific responsibility for liaison between primary and secondary school were recruited to be involved in the study.

Teaching of physical education in the primary schools was by the class teacher through mixed sex lessons. All primary schools followed the QCA schemes of work, but did not necessarily fulfil national curriculum requirement in regard to the coverage of areas of activity

Table 3.2

Details of Primary / Combined Schools Involved in the Research

School	A1a	A1b	A1c	A1d	A2e	B3f	C4g	C4h
Data from OFSTED reports								
Type of school (based on OFSTED classification)	Roman Catholic Infant and junior	Roman Catholic Nursery, infant and junior	Roman Catholic Infant and junior	Roman Catholic Infant and junior	Primary	Infant, junior and year 7	Infant and junior	Infant and junior
Age of pupils	5 – 11	3 - 11	4 – 11	5 – 11	4 – 11	3 – 12	3 – 11	3 – 11
Number of pupils on roll	400	334	204	317	411	383	451	460
Number of pupils in year 6	57	55	27	48	61	45	58	60
Date of last OFSTED inspection	2000	2002	1998	2002	1999	2002	2002	2002
OFSTED comment on attainment (in English, mathematics and science)	Attainment is well above average compared to similar schools	Attainment is well above average compared to similar schools	Attainment is well above average compared to similar schools	Attainment is well above average compared to similar schools	Attainment is average or below compared to similar schools	Attainment is below average compared to similar schools	Attainment is above average compared to similar schools	Attainment is average or above compared to similar schools

OFSTED comment on attitudes to school and where identified specifically towards physical education	Pupils have positive attitudes to school in general	Pupils have good attitudes to school in general	Pupils exhibit very good attitudes towards physical education	Attitudes to school are positive in general	Attitudes to school are good in general. Attitudes to physical education are positive	Attitudes to school are very good in general	Attitudes to school are good in general. Attitudes towards physical education are good / very good	Attitudes to school are good in general
Data from class teachers								
Grouping for physical education	Mixed sex	Mixed sex	Mixed sex	Mixed sex	Mixed sex	Mixed sex	Mixed sex	Mixed sex
Facilities	Hall, 1 gym, 3 tarmac playground	Hall, 1 tarmac netball court	Hall, playground area, grassed area	Gym, 1 tarmac playground	School hall, tarmac area. Also uses secondary school facilities	2 halls, tarmac playing area, large field	Hall, 1 tarmac playground, large field	Hall, 1 tarmac playground, field
Schemes of work used	QCA	QCA	QCA	QCA	QCA	QCA	QCA	QCA

Curriculum provision for physical education	Games, Gymnastics, Swimming and Athletics	Dance, Games, Gymnastics	Dance, Gymnastics, Games and Outdoor and Adventurous Activities	Games, Gymnastics, Swimming and Athletics	Dance, Games, Gymnastics, Swimming Athletics and Outdoor and Adventurous Activities	Dance, Games, Gymnastics, Swimming and Athletics	Games, Gymnastics, Dance and Swimming	Games, Gymnastics, Athletics, Swimming, Dance, Outdoor and Adventurous Activities
Extra-curricular activities	Football, Gaelic football, Hurling, Cricket, Rounders, Athletics, Cross country	Football, Netball, Tag Rugby, Gaelic football, Dance	Football, Netball, Gaelic football, Athletics, Cross-country, Swimming	Gaelic football	Football, Badminton, Netball, Basketball	Football, Cricket, Badminton, Gymnastics	Netball Football Rounders	Football, Cricket, Athletics.

Table 3.3

Details of Secondary Schools Involved in the Research

School	A1	A2	B3	C4
Data from OFSTED report				
Type of school	Roman Catholic Voluntary Aided (designated sports college, 2000)	Comprehensive	Comprehensive (designated sports college, 1999)	Comprehensive
Age of pupils	11 – 18	11 – 18	12 – 18	11 – 18
Number of pupils on roll	1113	2381	658	1176
Date of last OFSTED	2000	2000	2001	1998
OFSTED comment on attainment within the school	Above average	Average	Below average	Above average
OFSTED comment on attitudes to school	Pupils have excellent attitudes to work in general	Pupils have very good attitudes to school in general	Pupils have good attitudes to school in general	Pupils have positive attitudes to school
Data from school				
Groupings for physical education	Mixed and single sexed	Mixed and single sexed	Mixed and single sexed	Mixed and single sexed
Facilities	Sports Hall / Gym, hard court playing surfaces, fitness suite, playing fields off site	Sports Hall, Gym, Hard Court surfaces, playing fields	All weather pitch, playing fields, hard court outdoor courts, sports hall, gym, swimming pool, fitness suite	Sports Hall, Gym, Hard Court playing areas, fields
Schemes of work used	Adapted from QCA	Adapted from QCA	Adapted from QCA	Adapted from QCA
Curriculum provision for physical education	Athletics, Dance, Games, Gymnastics,	Athletics, Dance, Games, Gymnastics, Swimming	Athletics, Dance, Games, Gymnastics, Swimming	Athletics, Dance, Games, Gymnastics,
Extra-curricular areas of activities	Athletics, Games,	Athletics, Games,	Athletics, Games, Swimming	Athletics, Dance, Games,

3.2.1.1 School A1

School A1 was an 11 – 18 secondary school located in central England. It received sports college designation in 2000. At the time of the study the school roll was in excess of 1100. The school's most recent OFSTED report conducted in 2000 identified attainment to be above average with pupils demonstrating excellent attitudes to work.

In terms of physical education the school facilities included sports hall / gym, hard court playing surfaces, a fitness suite and playing fields which were located off site and required pupils to walk to them for their lessons.

Provision for physical education reflected National Curriculum requirements with all areas of activity provided, although percentage of time allocated showed an emphasis towards games activities, which accounted for 40% of the overall physical education time allocation at year 7. Pupils had 3 hours of physical education per week, with activities taught as 12 hours blocks over a 4-week period. The same teacher taught these sessions, with staffing allocation reflecting staff availability and specialism.

Pupils were taught in single sexed groups reflecting teacher's beliefs that such methods were more productive and maintain motivation during the developmental changes associated with puberty as well as and some national governing body regulations that restrict the playing / participation of pupils in mixed sex competitive situations. Lesson content focused on the delivery of high quality physical education where pupils are inspired and helped to learn and achieve. Pupils received clear outlines of what the learning objectives of each lesson were, allowing them to assess their individual progress.

On arrival at the school an assumption was made that pupils were working at level 3 (therefore below national curriculum expectations) with exceptional students working at level 4. Such levelling provided guidance for subsequent lesson planning. Within the school, assessment was undertaken at the end of each activity. Pupils received two marks, one based upon their level of attainment and a second based on their progress. At the end of each year an averaged level of attainment was recorded.

Compared with their primary feeder schools, pupils attending school A1 received an increase in the time they were allocated for physical education and with it an increase in the range of activities taught. Further they experienced a difference

in the pedagogical approaches experiences in respect of a movement from mixed to single sexed teaching, and in the facilities available for the teaching of physical education. On arrival at the school evidence suggests that staff under estimate pupils ability adopting a fresh start approach with lessons planned at a level lower than that of which the majority of pupils may be capable.

3.2.1.2 School B3

School B3 was an 11 – 18 secondary school located in Southern England. It received sports college designation in 1999. At the time of the study it had a school roll in excess of 650. The school's most recent OFSTED report conducted in 2002 identified attainment to be below average with pupils demonstrating good attitudes to school in general.

In terms of physical education the school facilities included sports hall, gym, hard court playing surfaces, a fitness suite, swimming pool, playing fields and an all weather pitch. Provision for physical education reflected National Curriculum requirements with all areas of activity provided except for outdoor and adventurous activities. The percentage of time allocated showed an emphasis towards games activities accounting for 50% of the overall physical education time allocation in year 8. Pupils received 2 hours of physical education per week. Staffing allocation reflected availability and specialism.

Pupils were taught in mixed and single sexed groups. Groups were based on ability with a top boys and top girls group with a mixed lower ability group. However if staffing allowed all pupils were taught as single sexed groups. The organisation of lessons reflected teacher's beliefs that such methods were more productive and maintained motivation during the developmental changes associated with puberty and some national governing body regulations as previously described. Lesson content focuses on the delivery of high quality physical education where pupils are inspired and helped to learn and achieve. Pupils received clear outlines of what the learning objectives of each lesson were which allowed them to assess their individual progress.

On arrival at the school baseline assessments were undertaken so that staff in the school could identify each pupils' level of attainment. Whilst staff identified a need to reduce the reliance on baseline assessments on arrival, it was felt appropriate due to a lack in the consistency of curriculum provision and assessment for physical

education in the primary schools. Within the school, assessment was undertaken at the end of each activity, with pupils receiving an averaged level of attainment at the end of each year.

Therefore pupils attending school B3 received an increase in the time they were allocated for physical education compared to their primary schools and with it an increase in the range of activities taught. Further they experienced a difference in the pedagogical approaches adopted by the secondary school in respect of a movement from mixed to single sexed teaching (where teacher allocation allowed), and in the facilities available for the teaching of physical education. Further, school B3 adopted a fresh start approach to teaching by running baseline assessments on pupils as they arrive.

3.2.1.3 School C4

School C4 was an 11 – 18 secondary school located in London. At the time of the study it had a school roll in excess of 1150. The school's most recent OFSTED report conducted in 1998 identified attainment to be above average with pupils demonstrating positive attitudes to school.

In terms of physical education the school facilities included sports hall, gym, hard court playing surfaces and playing fields. Timetabling allocated pupils with 2 hours and 10 minutes of physical education per week. The same teacher taught these sessions with staff allocation reflecting availability and specialism.

Provision for physical education at key stage 3 did not reflect National Curriculum requirements. Boys were taught athletics, games and gymnastics, whilst girls were taught athletics, dance, games and gymnastics. However the percentage of time allocated for both boys and girls showed an emphasis towards games activities accounting for over 70% of the overall physical education time allocation during year 7.

Pupils were taught in single sexed groups reflecting teacher's beliefs that such methods were more productive and maintain motivation during the developmental changes associated with puberty and some national governing body regulations as previously identified. Lesson content and organisation focused on the principles associated with guided discovery and reciprocal teaching, allowing pupils to reflect on their own learning.

The school adopted a fresh start approach to teaching due to a lack of links between themselves and their primary feeder schools. Within the school, assessment was undertaken at the end of each activity, with an averaged grade awarded at the end of the year. Assessment was based on national curriculum levels and identified pupils as working towards, achieving or working beyond.

Thus pupils attending school C4 received an increase in the time they had allocated for physical education lessons. For most they had a decrease in the areas of activity they studied, but this did not necessarily mean that there was a decrease in the range of activities they experienced. Differences in the pedagogical approaches experienced by pupils were also evident with the introduction of single sexed teaching, and in the facilities and resources available for the teaching of physical education. Further, school C4 adopted a fresh start approach to the teaching of pupils in physical education.

3.2.2 Selection of pupils for the study

Purposive sample techniques were employed for the selection of pupils for the study. In this respect pupils selected to participate in the study were intending to transfer to the respective secondary schools. All pupils were recruited whilst they were still in year 6. The number of pupils involved in the study at the end of year 6 is shown in table 3.4.

Table 3.4

Number of Pupils Involved in the Study at the End of Year 6

Primary School	Number of pupils	Number of boys	Number of girls
A1a	18	12	6
A1b	17	8	9
A1c	21	11	10
A1d	33	17	16
A2e	21	11	10
B3f	38	19	19
C4g	34	16	18
C4h	39	19	20
Total	221	113	108

In schools, A1a, A1b, A1c, A1d, A2e, C4g and C4h pupils transferred to the secondary school at the end of year 6, whilst pupils in school B3f remained in the combined school until the end of year 7. Therefore transfer between schools took place at different points in the study. The numbers of pupils involved in the study at the beginning of year 7 are shown in table 3.5. Pupils from schools A1a, A1b, A1c and A1d had now transferred to school A1, pupils from school A2e had transferred to school A2, pupils from school B3f remained within their combined school, whilst pupils from schools C4g and C4h had transferred to school C4. During the research period school C4 requested that all pupils in year 7 (first year in the secondary school) be involved in the study. As a consequence the number of subjects in the study increased.

Table 3.5

Number of Pupils Involved in the Study at the Beginning of Year 7

School	Number of pupils	Number of boys	Number of girls
A1	77	38	39
A2	9	7	2
B3f	44	19	25
C4	169	102	67
Total	299	166	133

Due to the small numbers of pupils involved in the study at the beginning of year 7, school A2 was removed from the study. Table 3.6 shows the number of pupils involved in the study at the end of year 7.

Table 3.6

Number of Pupils Involved in the Study at the End of Year 7

School	Number of pupils	Number of boys	Number of girls
A1	65	36	29
B3f	39	15	24
C4	180	113	67
Total	284	164	120

Table 3.7 shows the number of pupils involved in the study at the beginning of year 8. By this time all pupils had transferred to their respective secondary schools.

Table 3.7

Number of Pupils Involved in the Study at the Beginning of Year 8

School	Number of pupils	Number of boys	Number of girls
A1	64	28	36
B3	38	16	22
C4	168	106	62
Total	270	150	120

Table 3.8 shows the number of pupils who were involved throughout the study.

Table 3.8

Number of Pupils Involved Throughout the Study

School	Number of pupils	Number of boys	Number of girls
A1	31	12	19
B3	22	11	11
C4	9	3	6
Total	62	26	36

3.2.3 Consent

Consent was sought for pupils to participate in the study. Frankfort-Nachmais and Nachmais (1992) suggest that when obtaining consent the following detail needs to be included:

1. An explanation of the procedures and purpose of the research.
2. The potential discomfort and risks to which the participant might be exposed.
3. The benefits that the participant will gain from involvement in the research.
4. The alternative methods that could be employed to collect the data required.
5. An acknowledgment that any concerns / enquiries will be answered.

6. The opportunity to withdraw at any time.

Verbal consent was gained from the Head Teacher of the primary / combined schools and head of the physical education department in the secondary schools involved. Pupils selected to take part in the study, i.e. those transferring to the identified secondary schools, were classified as minors, therefore they were given a consent form to be completed by their parents / guardians. The design of the consent form was consistent with that suggested by Frankfort-Nachmais and Nachmais (1992). A copy of the consent form is included in Appendix C.

3.3 Types of Research

As Bell (1991) stated, the research methods employed should be appropriate to the data that needs to be collected. Within education, research is predominantly descriptive (Thomas & Nelson, 2001), seeking to outline current practice. Qualitative and quantitative methods are used. This section provides an overview of types of research and their associated research method applicable to educational research.

3.3.1 Descriptive research

Best (1970, in Cohen & Manion, 1994) suggests that descriptive research focuses on:

> Conditions or relationships that exist; practices that prevail; beliefs, points of views, or attitudes that are held; processes that are going on; effects that are being felt; or trends that are developing. At times, descriptive research is concerned with how *what is* or *what exists* is related to some preceding event that has influenced or affected a present condition or event (p.67).

Descriptive research can be used to determine relationships between variables (as in correlation studies), and / or to look at changes overtime (developmental research) – allowing for trends to be established.

3.3.2 Developmental research

To look at changes overtime, two techniques can be employed i.e. longitudinal and cross-sectional studies.

In longitudinal research the same sample is studied over an extended period of time (Cohen et al, 2000). The advantage of longitudinal studies can be summarised as:

- Allow for trends to be identified; for example, maturation or physical development.

However, there are a number of disadvantages to longitudinal studies. These can be summarised as:

- Time consuming as repeated data collection visits are required;
- Expensive due to the number of data collection visits required;
- Subject mortality; for example absence on the day of data collection, because they have moved away, or because they no longer want to participate;
- Measurement effect; participants become bored with the instrument and may give inappropriate responses or the instrument becomes inappropriate to the individuals involved.

In contrast, cross-sectional studies look at "samples of participants from different age groups ..... in order to assess the effects of maturation" (p.278). Cohen, el al. (2000) suggest that cross-sectional research "produces a 'snapshot' of a population at a particular point in time" (p.175). The advantages of cross-sectional studies can be summarised as:

- Data collected at one time point;
- Absence of subject mortality and measurement effect;
- Relatively cheap due to limited number of visits.

Disadvantages to cross-sectional studies can also be identified and can be summarised as:

- Do not allow trends to be identified.

3.3.3 Quantitative and qualitative research

Research can be quantitative or qualitative. In quantitative research "researchers collect facts and study the relationship of one set of facts to another. They measure, using scientific techniques that are likely to produce quantified and, if possible, generalizable conclusions" (Bell, 1991, p.4). Within education, quantitative research methods include questionnaires and observation.

Thomas and Nelson (2001) define qualitative research as "Research methods that involve intensive, long-time observation in a natural setting; precise and detailed recording of what happens in the setting; interpretation and analysis of the data using description, narratives, quotes, charts and tables" (p.15). Bell (1991) suggests that

qualitative research is "more concerned to understand individual's perceptions of the world. They seek insight rather than statistical analysis" (p.4). Qualitative research methods used in educational research include questionnaires, interviews, observations and dairies.

Thus within education both quantitative and qualitative research can be conducted. The next section of the chapter looks at the different research methods available.

3.4 Research Methods

A range of research methods can be employed to collect data relevant to the research being undertaken. These include questionnaires, interviews, observations, dairies and documentary analysis.

3.4.1 Questionnaires

A questionnaire has been described as a "Type of paper-and-pencil survey used in descriptive research in which information is obtained by asking subjects to respond to questions rather than by observing their behaviour" (Thomas & Nelson, 2001, p.261). McKernan (1991) highlights the advantages of questionnaires as;

- Easy to administer;
- Large amounts of data can be collected over a short period of time;
- Provide direct responses;
- Can be used to collect both factual and attitudinal data.

However, McKernan (1991) identifies the disadvantages of questionnaires as:

- Difficult to design;
- Low reliability of responses;
- Large amount of time required to collate and analyse data;
- Time required analysing data.

It may be appropriate to use previously constructed questionnaires, if available, that are valid and reliable for the sample in the study. However, if not available, it is necessary to design a questionnaire specific to the study.

3.4.1.1 Questionnaire construction

Construction of a questionnaire can be difficult and time-consuming, as it requires the formulation of questions relevant to the focus of the research in a clear, precise way so that the participants understand them. The questions must be able to

be understood by the participants involved in the study and therefore must be appropriate for the sample being studied.

The validity and reliability of questionnaires can be measured through a pilot study on a similar population to those involved in the study or as part of the overall study. Validity is the extent to which the questions measure what they are supposed to measure, whilst reliability is the extent to which the results obtained can be repeated.

Questions can be classified as open or closed. According to May (1993), open-ended questions "give respondents a greater freedom to answer the question because they answer in a way that suits their interpretation" (p.78). The advantages of open-ended questions can be summarised as:

- Respondents are not restricted in the responses they give.

The disadvantages of open-ended questions can be summarised as:

- Time consuming to answer;
- Time consuming to analyse.

In contrast, closed questions "limit the number of possible answers to be given and therefore can be pre-coded so that each answer may be given a specific number for the purpose of analysis" (May, 1993, p.78). Advantages of closed questions can be summarised as:

- More easily and quickly answered;
- Data analysis more efficient.

The disadvantages of closed questions can be summarised as:

- Limit responses available to the respondent.

3.4.1.2 Questionnaire administration

There are different means of administering questionnaires. Opie (2004) describes these as:

- Postal questionnaires;
- Self-administered questionnaires.

In a postal survey questionnaires are sent to respondents to complete and return. The advantages of postal questionnaires can be summarised as:

- Can focus on a large population;
- Allow for generalisations to be made.

Disadvantages of postal questionnaires can be summarised as:

- Expensive to administer which may limit the sample size;
- Researcher not present during administration and therefore has limited control over how the questionnaires are completed;
- Lower response rates than self-administered - Cohen and Manion (1994); Somekh and Lewin (2005) suggest that an initial response of 40% is the norm.

Self-administered questionnaires are administered either to individual participants or to a group of participants at the same time. Whilst it is not necessary for the researcher to be present to administer the questionnaire, their presence may assist in successful completion of the questionnaire, as they are available to provide clarification if required. The use of self-administered questionnaires has been commonly employed within the field of educational research (Muijs, 2004), and is suggested (McKernan, 1991) as the most appropriate means of collecting data by questionnaire from pupils. Opie (2004) identifies advantages of self-administered questionnaires as:

- Questionnaires can be easily distributed;
- Questionnaires completed at the same time;
- Researcher can be present during completion allowing clarification to be given during the completion of the questionnaire;
- High response rate.

However, the disadvantage of self-administered questionnaires can be summarised as:

- Researcher may lead respondents;
- If using group administered questionnaires, participants have the potential to copy other's answers.

3.4.2 Interviews

Frankfort-Nachmias and Nachmias (1992) define interviews as "a face-to-face interpersonal role situation in which an interviewer asks respondents questions designed to elicit answers pertinent to the research question" (p.224). McKernan (1991) suggests that the interview is in fact "an oral questionnaire" (p.130). The advantages of interviews can be summarised as:

- Flexible - they allow the researcher to probe more deeply into issues that may arise during the interviews;
- Controllable - the researcher controls to some degree the focus of the interview;
- High response rate - as the researcher is present during the interview;
- Allows for the collection of supplementary data - as the interviewer can develop lines of enquiry during the interview itself.

The disadvantages of interviews can be summarised as:

- Expensive – in respect of transport and time;
- Interviewer can bias the results;
- Respondent lacks anonymity.

Recording of interviews can be either written, with the researcher making notes during the interview, through audio recording, which requires subsequent transcription, or through a combination of the two procedures.

Cohen and Manion (1994) identify a range of interviews:

> from the formal interview in which set questions are asked and the answers recorded on a standardized schedule; through less formal interviews in which the interviewer is free to modify the sequence of questions, change the wording, explain them or add to them; to the completely informal interview where the interviewer may have a number of key issues which she raises in conversational style instead of having a set questionnaire (p. 271).

Consequently, these follow a continuum from formal interviews, which are very structured, to informal interviews to unstructured interviews. These are generally called structured, semi-structured and unstructured interviews (Opie, 2004), the characteristics of which can be summarised as:

Structured:

- Controlled by interviewer;
- Relatively inflexible;
- Questions are guided by researcher's predetermined agenda;
- Provide easy framework for analysis.

Semi-structured:

- Less control by interviewer than structured interviews;

- More flexible than structured interviews;
- Questions are not completely predetermined;
- Mixed framework for analysis as answers can not be predetermined

Unstructured:

- Control more evenly distributed between researcher and respondent than other forms of interview;
- Very flexible;
- Direction unpredictable;
- Likely to be more difficult to analyse than other forms of interview;
- May throw up unexpected findings.

(Adapted from Opie, 2004, p.119).

Whilst traditionally interviews have been conducted on individuals, it is also possible for individual's to be interviewed within groups. Cohen et al, (2000) identify group interviews as beneficial when interviewing children, for a number of reasons:

- Provide a forum for discussion;
- Issues raised can form the basis for subsequent individual interviews;
- Less time consuming than individual interviews;
- Less intimidating for children.

However there are also disadvantages that can be summarised as:

- Group interviews are unlikely to reveal the true feelings of the individual's involved;
- Transcription and subsequent data analysis can be time consuming.

3.4.3 Observation

Observation is a tool commonly used in educational research (Cohen et al., 2000). Mason (1996) defines observation as "methods of generating data which involve the researcher immersing herself or himself in the research setting, and systematically observing dimensions of that setting, interactions, relationships, action events and so on, within it" (p.60).

Muijs (2004) and Simpson and Tuson (2003), identify the following advantages of observational research:

- Allows for the observation of social interactions;

- Is flexible, allowing for a range of variables to be observed;
- Takes place within a natural setting therefore reflects real-life situations;
- Provides a permanent record if videoed, or if in written form;
- Can be used to support other research methods, thereby enriching the data collected;
- Can be used to address a range of research questions.

However disadvantages have also be identified:

- Observations are demanding in respect of time, effort and resources;
- They are intrusive in that although they take place within the individual's, natural environment, they may cause stress to those involved;
- The observer can influence the setting.

The researcher can be either a participant or non-participant observer. In participant observation the researcher becomes an integral part of the group being observed. This requires total immersion into the group, and is best suited "when the researcher wishes to understand by engaging in the roles of those studied" (McKernan, 1991, p.60). In contrast, non-participant observation occurs when "the researcher is unobtrusive and does not engage in the roles and work of the groups as a member, but remains aloof and distanced from the action" (McKernan, 1991, p.61).

Gratton and Jones (2004) identify the advantages of non-participant observations as:

- Limit the impact on the setting being observed therefore reducing the impact of the research on those being observed;
- Accuracy of the data is increased as observations can record actual behaviours rather than those reported by the individual;
- Unobtrusive access may be easier.

However disadvantages are also evident (Gratton & Jones, 1994):

- Lack of interaction between researcher and participant may limit understanding of the behaviours observed;
- Presence of researcher may distort data collected;
- May require use of recording equipment which may reduce access.

Simpson and Tuson (2003) identify three ways in which observations can be recorded. These they categorise as;

- Systematic; whereby a fixed schedule is used to provide structured, quantitative data;
- Descriptive; which provides descriptive qualitative data;
- Technological; which provides an actual copy of the observation, through video recording.

Video recording of observation provides the researcher with a permanent visual record of the observation, rather than a written record. Further, more than one person can observe, therefore providing an opportunity for validity and reliability to be tested.

However there are number of issues in relation to videoing, particularly when conducting educational research. These include ethical considerations in respect of videoing children, the production of quality videos and the impact of someone videoing the lesson on the climate within the classroom (Thomas & Nelson, 2001).

3.4.4 Dairies

Dairies provide a personal document reflecting the thoughts and feelings of an individual. McKernan (1991) identifies three types of diary that can be used in educational research.

- Intimate journal: for example a personal diary completed daily;
- Memoir: completed less frequently, providing a more objective interpretation of events;
- Log: provides a running summary of events.

McKernan (1991) identifies the advantages of using diaries as:

- Allows the researcher to collect data that does not normally reach the public domain;
- The systematic recording by the individual of their personal feelings ensures that the data does not become distorted.

However, some disadvantages of diaries are:

- Entries in the dairy may be shared between those completing them– especially if completed by children, reducing anonymity;
- Require a level of commitment for the duration of the research period;
- Are individual interpretations of events and therefore limit the opportunities for generalisations to be made.

3.4.5 Documentary Analysis

Baumgartner, Strong and Hensley (2002) emphasise that establishments such as schools provide a wealth of information in the documentation they maintain. They argue that the analysis of such documentation provides the researcher with an insight into the organisation and structure of these establishments. Thus they provide background information that can be used to support observational and interview material.

McKernan (1991) identifies the advantages of documentary analysis as:

- Allows facts to be collected retrospectively;
- Data collected is more reliable than from the data collected using other techniques;
- Documentation may be more easily accessible.

However he identifies the disadvantages as:

- Data may be biased, based either upon personal opinion or political bias;
- Inaccuracy of recording may be evident;
- Issues regarding confidentiality may be breached;
- Analysis may be time-consuming.

3.5 Research Types and Methods selected for use in the study

The research methods to be used in this study were used to answer the research question being asked. In doing so they reflected methods previously used to address similar questions.

Research in the area of transfer in physical education is limited. The focus of this research was to identify changes in attainment, self-esteem, self-motivation and attitudes amongst pupils towards physical education as they transferred from the primary to the secondary school setting. Therefore the study provided the opportunity to collect baseline data within the area specifically it was designed to identify what changes occurred, when these changes occurred and whether a change of school acted either positively or negatively upon these changes. Further it provided the opportunity to identify some reasons why changes may occur.

Previous research into the impact of transfer on attainment, self-esteem, motivation and attitudes across curriculum subjects has used predominantly quantitative approaches, specifically self-response scaled questionnaires. The advantage of using such methods allows large amounts of data to be collected

efficiently and effectively over a short period of time. Whilst this is beneficial in collecting baseline data, thereby allowing trends to be established, it reduces the depth of the responses participants can provide. Consequently questionnaires can be limited in providing reasons for respondent's responses, thereby limiting the richness of the data collected. Such a lack of richness could be addressed through the use of more open-ended questions within the questionnaire, allowing participants to provide opportunities to explain their responses, or through the conducting of interviews.

As the purpose of the study was to collect baseline data, questionnaires were deemed the most effective method to employ, although acknowledgement was made that in doing so it limited the depth of responses that could be achieved. In terms of self-esteem and self-motivation this method reflected previously conducted research (see Alves-Martins et al., 2002; Biddle et al., 1996; Hirsch & Rapkin, 1986; McCarthy & Hoge, 1982; Rosenberg, 1965).

However in looking at pupil attitudes, reasons for changes could be identified. To reflect this the development of a questionnaire consisting of more open-ended questions was necessary. This would still allow large amounts of data to be collected, but would extend the depth of the responses provided, and provide the potential for the identification of reasons for changes to be made.

However, although the use of open-ended questions would provide some indication of pupils' individual reasons, they would still limit the depth of the responses provided. To further enhance the depth of these responses it would therefore be necessary to conduct interviews. As has previously been identified the advantages of interviews are such that they provide flexibility, allowing for the collection of supplementary data as the interviewer can develop lines of enquiry during the interview itself. However it is the manner in which interviews are conducted that influence the quality of the data collected. In needing to provide consistency in the questions asked within the interview situation as well as providing the opportunity for participants to expand upon their responses, semi-structured interviews were adopted.

However the adoption of questionnaires and interviews were not the only methods that could have been used to collect the data required. The use of pupil diaries could have provided greater richness in data as pupils recorded their feelings and experiences during the transfer from primary to secondary school. However in selecting such a method there would have been a need to monitor closely the

completion of them and consequently there would have been an increase in the commitment of both pupils and staff. Had the focus of the study been on a smaller sample size such a method may have been more appropriate. Thus, the disadvantages associated with the use of diaries were felt to outweigh the advantages associated with this method of data collection.

Therefore the selection of methods for the collection of pupil data was predominantly quantitative in their nature. More qualitative methods were chosen in order to get greater depth or to try to identify reasons for the responses given.

In looking at the processes of continuity and progression and the methods employed by schools to manage the transfer between primary and secondary school there was a need for a more qualitative approach to the collection of data. In doing so teachers would be given the opportunity to provide in depth responses, allowing for key issues to be drawn out. Further, responses would have the potential to reflect individual experiences. Thus the employment of more open-ended questionnaires and interviews were felt to be more appropriate in this respect. This would provide a greater depth of data, which would potentially provide reasons for participant responses. However the data collected would still provide only provide baseline data on which further research could be based.

In order to collect data regarding the schools involved in the study, staff were provided with a series of open-ended questions. These provided an effective method of collecting consistent data from the schools involved. For greater depth to the responses provided from these questionnaires, analysis of school documentation in the form of the school's latest OFSTED report was conducted. Using such documentation provided an evidence-based form of data, independent of either the researcher or the school. Further it provided background data that could be used to support some of the data collected from both pupils and teachers.

Thus in order to achieve the purpose of this research study descriptive, developmental data was collected about pupils' attainment, self-esteem, self-motivation and attitudes towards physical education between the end of year 6 and the beginning of year 8. General and continuity and progression information was also collected from the schools involved. Both quantitative and qualitative data collection methods were used. Table 3.9 provides a summary of the specific research methods used.

Table 3.9

Summary of the Research Methods Used during the Study

Data to be collected	Research technique employed
Pupil Attainment	Observation
	Analysis of teacher records
Pupil Self-esteem	Questionnaire
Pupil Self-motivation	Questionnaire
Pupil Attitudes	Questionnaire
	Interview
Continuity and progression	Questionnaire completed by teachers
	Interview with teachers
School information	Documentary analysis
	Questionnaire completed by teachers

The next section looks in more depth at the specific methods of data collection employed during the study period

3.5.1 Instruments used for the collection of pupil data

Pupil data was collected for attainment, self-esteem, self-motivation and attitudes.

3.5.1.1 Attainment

Analysis of teacher records and observational techniques were employed to collect data regarding pupils' attainment. Pupils were observed during one physical education lesson and their attainment was recorded using a criteria reference sheet (see appendix D). In primary schools teachers were asked to teach a standardised lesson (see appendix E) based on the National Curriculum schemes of work for games developed by QCA (2000).

The rationale for teaching standardised lessons was that it ensured consistency in the lessons observed, resulting in pupils in different schools being watched participating in the same area of activity (games), and performing the same practices. In selecting games as the area of activity to be observed by the researcher it reflected the greater amount of time allocated by schools when compared to other areas of activity. Further it reflected the fact that schools taught games as an area of

activity throughout the year, whereas other areas of activity were taught at specific times of the year. Finally it reflected a commonality of curriculum content across the schools involved in the study allowing for comparisons to be made. Consequently, games could be observed in all schools at both the beginning and end of the year.

However, the disadvantages of selecting games as an area of observation meant that assessment by the researcher would only be within the context of games activities. Further, the use of a prescribed lesson would mean that the lesson itself would not necessarily be in the context of the scheme of work that pupils would normally be following and thus may not take into account their previous learning in games. Consequently it was therefore necessary to test for reliability and validity of this method during the pilot study. However, it was also acknowledged that using games activities could favour boys as games is traditionally viewed as a male orientated activity.

3.5.1.2 Self-esteem

Review of current literature (Fox, 1988b; Shavelson et al., 1976) identifies self-esteem as a multi-dimensional concept. Whilst generic self-esteem questionnaires are available (see Rosenberg, 1965), the purpose of this study was to focus on self-esteem in the physical domain and specifically in physical education. Thus, the Physical Education Specific Self-esteem questionnaire (Reeves & Cooper, 1994), which was developed from the Rosenberg scale (1965), was selected for use in this study.

The Physical Education Specific Self-esteem questionnaire (Reeves & Cooper, 1994) was developed to assess changes in self-esteem in a sample of 50 boys in England during the transfer from primary to secondary school. A copy of the questionnaire can be found in appendix F. It comprised nine closed questions. Responses to questions were closed with the number of options being either 2, 3 or 4 options for example; yes or no; yes often, yes sometimes, no never; and strongly agree, agree, disagree, strongly disagree, with the maximum score for each question being 1. Table 3.10 shows a summary of responses and the associated scoring.

Table 3.10

Responses and associated scoring for The Physical Education Specific Self-esteem questionnaire (Reeves & Cooper, 1994)

Response	Scoring
Yes	1
No	0
Yes often	1
Yes sometimes	½
No never	0
Strongly Agree	1
Agree	1
Disagree	0
Strongly Disagree	0

Individual scores were calculated by the addition of the total number of positive responses. The maximum score achievable was 9, with high scores representing high self-esteem. In a previous administration of the questionnaire (Reeves & Cooper, 1994), a mean score of 7.21 and standard deviation of 1.84 was obtained. Reeves and Cooper (1994) established construct validity by confirmation of pupil scores by teaching staff, whereby pupils identified as having low self-esteem towards physical education were also found to achieve low scores on the questionnaire. A test-retest score of $F = .125$, $p>.05$ was obtained, with an interclass alpha reliability correlation $R = .94$.

Although the questionnaire was proven valid and reliable for a similar sample in respect of age and nationality, it had not previously been administered to girls. It was therefore necessary to test for reliability for girls during the pilot study.

3.5.1.3 Self-motivation

As with self-esteem, motivation is multi-dimensional (Harter, 1990), with self-motivation being one dimension. A number of generic motivation questionnaires exist (e.g. The Intrinsic Motivation Scale (McAuley, Duncan & Tammen, 1989), The Situational Motivation Scale (Guay & Vallerand, 1995)). However, the purpose of this study was to look at self-motivation specifically in physical education. Therefore the self-motivation Inventory Modified for Children (SMI-C) developed by Biddle et al. (1996) was selected for use in this study. A copy of this questionnaire can be found in appendix G.

The questionnaire consisted of 20 closed questions. Scoring was based upon a 5-point likert-type scale (YES! (5); yes (4); middle, (3); no, (2); NO! (1)). Questions 3, 5, 6, 7, 11, 12, 13, 16 and 19 were scored positively. Scoring for questions 1, 2, 4, 8, 9, 10, 14, 15, 17, 18 and 20 was reversed, thus negative responses scored higher than positive responses. Table 3.11 provides a summary of responses and associated scoring.

Table 3.11

Responses and associated scoring for The Self-motivation Inventory Modified for Children (SMI-C) (Biddle et al, 1996)

Question numbers	Scoring				
	YES!	Yes	Middle	No	NO!
3, 5, 6, 7, 11, 12, 13, 16, 19	5	4	3	2	1
1, 2, 4, 8, 9, 10, 14, 15, 17, 18, 20	1	2	3	4	5

The maximum score for each question was 5 points with the maximum score for the questionnaire being 100. The minimum score was 20. High scores demonstrated high self-motivation. The questionnaire had previously been administered to boys and girls in the age range 11 – 15 years located in the South of England, thereby reflecting the age range of the participants chosen to participate in this study. Biddle et al. (1996) found means in the range 66.43 – 70.08, standard deviations in the range 10.68 – 11.1. Internal validity $\alpha = .75$ and a Test-retest reliability of $r = .86$ had previously been obtained.

3.5.1.4 Pupil Attitudes

No existing questionnaires suitable for this study were identified. Therefore questionnaires were designed to look at pupil's attitudes towards physical education. The questionnaire was administered four times during the transfer from primary to secondary school. Six questions remained constant on the questionnaires. These asked whether pupils:

- enjoyed physical education;
- looked forward to their physical education lessons;
- they participated in extra-curricular activities organised by the school;
- participated in activities outside of school;
- saw themselves as good at physical education and;
- would choose to participate in physical education.

Other questions were added as appropriate to the time at which the questionnaire was administered. These additional questions focussed on:

- End of year 6 – the anticipation of a change in school;
- Beginning of year 7 – the impact of changing school;
- End of year 7 / beginning of year 8 – physical education in the secondary school;

Copies of the four questionnaires used can be found in appendix H.

Responses to the questions were either yes / no, or open ended.

Group interviews were also conducted with a sample of pupils to provide greater depth and clarity to the responses received from the questionnaires. Where possible this was with the same pupils. As with the questionnaires, questions varied according to the time at which the interviews were conducted. Interview schedules can be found in appendix I. No interviews were conducted at the beginning of year 8. The focus of the interviews conducted at each collection point is shown below:

- End of year 6 – the anticipation of a change in school;
- Beginning of year 7 – the impact of changing school;
- End of year 7 – physical education in the secondary school.

3.5.2 Staff information collected

3.5.2.1 Continuity and Progression

A questionnaire comprising open-ended questions was developed to look at teachers understanding of continuity and progression and the extent to which they felt them to be important in physical education during transfer. The questionnaire also asked teachers to identify any links with the schools to which they either transferred most pupils, or from which they received most pupils. Teachers were asked to identify whether they were aware of what was being taught in the primary or secondary schools to which they sent pupils or from which they received pupils, and whether there should be any agreement between primary and secondary schools in respect of what was taught in physical education. Finally teachers were asked to identify the type of assessment data provided on transfer and the extent to which it was used within the secondary school. A copy of the questionnaire can be found in appendix J.

Interviews were conducted in the secondary school with teaching staff to provide greater depth and clarity to the responses obtained through the questionnaires. Copies of the interview schedule can be found in appendix K.

3.5.3 School Information Collected

3.5.3.1 Documentary Analysis

General information about all schools (primary / combined and secondary) in the study was obtained from the school's most recent Office for Standards in Education (OFSTED) report i.e. the type of school, the age range of the pupils within the school, the number of pupils on roll in the school, pupil attitudes to secondary school in general and to physical education, and attainment in physical education. Further, information regarding the number of pupils in year 6 was collected from the primary / combined schools as this would provide an indication of the percentage of pupils who were transferring from the primary / combined school to the secondary school.

Information regarding physical education within the school was obtained through the completion by teaching staff of a proforma (see appendix L). Information requested related to whether physical education was taught in single or mixed sex groups or a combination of both, the facilities available for teaching the subject, the schemes of work used for teaching the subject, the curriculum taught, and the provision of extra-curricular activities.

3.6 Pilot Study

The aim of the pilot study was to trial the data collection methods, to ensure that administration was practical and to identify any limitations of the research methods selected. Further the pilot study allowed for the testing of validity and reliability of the observations for attainment, reliability of self-esteem questionnaire for use on girls, and the effectiveness of the attitude questionnaire designed.

The school identified for use in the pilot study was situated in LEA C. Consent was gained in the first instance from the head teacher of the school and the members of staff responsible for teaching year 6 pupils. Parent / guardian consent was obtained through the completion of a consent form distributed by and returned to the class teacher. All pupils (N = 54) in year 6 were invited to take part in the

research. Consent was obtained for 34 of these pupils (16 boys and 18 girls) who were aged 10 – 11 years.

Data was collected from these 34 pupils during their final term in the primary school in year 6. The researcher distributed questionnaires. Following an explanation by the researcher, pupils completed the self-esteem and self-motivation questionnaires prior to a physical education lesson. Those pupils who were identified by the school as requiring assistance in respect of reading / writing completed the questionnaires with help from the class teacher. The researcher gave any further assistance in the form of clarification of questions as and when required, but did not lead the pupils or suggest answers. On completion questionnaires were returned to the researcher.

Data regarding attainment was collected using two methods. Prior to the observation of the lesson, the two year 6 class teachers whose pupils were involved in the study, were provided with an assessment sheet based upon National Curriculum attainment for physical education, on which they recorded the attainment for each pupil in the lesson being observed. At the start of the lesson, pupils were issued numbered bibs for identification purposes. A standardised lesson based upon National Curriculum schemes of work for games activities, produced by QCA, was taught by one of the year 6 class teachers. The other teacher did not feel confident enough to teach the lesson, so the two classes were taught together. The lesson was video taped by the researcher in order that analysis on pupils' attainment could be undertaken after the lesson.

Pupils' attitudes towards physical education and their perceptions of changing schools were identified through semi-structured interviews conducted after the lesson. The interviews were audio taped for later transcription. Pupils were also asked to provide written responses to each of the questions as the interviews were being conducted enabling comparison of responses to be undertaken.

Data regarding the school was collected through the completion, by the year 6 class teachers, of a short questionnaire. Questions focussed on the physical education curriculum taught within the school, understanding of the concepts of continuity and progression, and the links currently established between the primary and secondary school in respect of the promotion of continuity and progression in physical education as well as the transfer arrangement currently used.

To check the reliability of the assessment data, paired sample t-tests were used to establish whether there was any significant difference in the attainment awarded by the researcher when compared to that awarded by the class teacher. No significant difference was found. The observation technique used was therefore deemed valid and reliable.

To confirm that the self-esteem questionnaire was reliable for use on girls, Cronbach alpha co-efficient analysis was conducted using Statistical Package for the Social Sciences (SPSS). Results revealed a Cronbach alpha coefficient of .72. Pallant (2003) states that such a score deems the questionnaire reliable.

To confirm the effectiveness of the attitude questionnaires, responses were read to establish the extent to which pupils understood the questions asked, and further, to identify the depth of the responses provided. Whilst pupils understood the questions asked, when explaining answers responses were limited. Modification of the questionnaire to more closed questions was therefore made.

3.6.1 Limitations and subsequent adaptations as a result of the pilot study

No major problems were identified as a result of the pilot study, resulting in limited changes needing to be made to data collection in the main study. The methods employed were effective. Further, the distribution and retrieval of the questionnaires proved efficient and effective.

However, a few issues were identified that needed to be addressed. A number of pupil questionnaires were incomplete. It was therefore necessary to take steps to encourage full completion of questionnaires. Two methods of checking would be adopted in the main study. After completing the questionnaires pupils would be asked to check that they had completed all questions, and the researcher would check the questionnaires as they were handed in.

The use of the prescribed lesson worked well. The teacher who taught the lesson was the physical education co-ordinator for the school and confident in teaching physical education. The reluctance by the second class teacher to teach the lesson resulted in a larger group than anticipated being observed. It was anticipated that at least some of the primary class teachers in other schools would not be confident to teach the class. The solution to this situation would be to discuss with the class teacher whether or not they felt confident to teach the lesson. If not, the researcher would teach the lesson and the class teacher would video the lesson.

Although this would bring inconsistency into the teaching, it was necessary to cater for the confidence of primary school teachers. Consequently, during subsequent data collection a log of the person teaching the lesson in the primary school and the person videoing the lesson was made. This is shown in table 3.13. It was not anticipated that there would be an issue of confidence in teaching the lesson in secondary schools so it was planned that the teacher would teach and the researcher would video the lesson.

There was a concern about the quality of the video for analysis of attainment data. This was mainly due to the number of pupils involved in the lesson. As has previously been identified, the lack of confidence of one member of staff to teach the lesson resulted in the pupils being taught as one large class rather than two smaller ones. Whilst attainment data was obtained on all the pupils in the lesson observed, it would be necessary to ensure that the total number of pupils in the class being observed during each lesson was reduced for subsequent data collection points.

Concern regarding the accuracy of the results of the attainment data was also raised. Although results revealed no significant difference between the levels given by the researcher and staff, to enhance the reliability of the results of attainment, a second observer would watch a copy of the videoed lessons and provide attainment data as a means of moderation. The overall level of attainment would be the level recorded by at least two of the observers. For example if attainment were awarded as 3, 3, 4 the overall level of attainment would be recorded as level 3, whereas if the levels were 3, 4, 4 the overall level of attainment would be recorded as level 4.

There was a lack of depth from the pupil semi-structured interviews about their attitudes, resulting in limited amounts of information. Questions needed to be modified to provide opportunity for more detailed responses. Further there was duplication in data between the verbal and written responses. Questions were therefore developed into a questionnaire that all pupils involved in the main study could complete. The use of semi-structured interviews would continue, but would become more focussed, acting to reinforce the questionnaire responses.

Analysis of the teacher questionnaire responses provided the depth of information required regarding continuity and progression and the establishment of links between schools. Consequently semi-structured interviews with teaching staff within the primary / combined school would not be conducted unless clarification

was needed. Interviews with secondary school teachers would continue to be conducted as the nature of the information sought was different.

Pupils involved in the pilot study were only included in the subsequent cross-sectional analysis of data. This was so that any differences in results due to different data collecting techniques used in the pilot study would not adversely affect the overall results.

3.7 Main Study

The main study was conducted over a 20-month period between May 2002 and December 2003. Data was collected at the end of year 6, the beginning of year 7, the end of year 7, and the beginning of year 8. Visits to each school lasted between 2 and 3 hours per class observed. The number of classes observed in each school varied according to the number of pupils being tracked within each school, timetabling and groupings within each school. During each visit the following research was conducted:

- Administration of the Physical Education Specific Self-esteem questionnaire (Reeves & Cooper, 1994);
- Administration of the Self-motivation Inventory for Children (SMI-C) (Biddle et al., 1996);
- Observation and videoing of physical education lesson;
- Administration of Attitudes questionnaire;
- Semi-structured group interviews with pupils about attitudes towards physical education and changing school;
- Collection of staff attainment on the pupils observed;
- Administration of staff questionnaires.

3.7.1 Administration of self-esteem, self-motivation and attitude questionnaires

During each visit to a school pupils were administered, by the researcher, the self-esteem, self-motivation and attitudes towards physical education questionnaires. For pupils in LEA's A and C the attitude questionnaire was administered at all 4 data collection points, for pupils in LEA B this was administered at the end of year 7 and the beginning of year 8. The time at which the attitude questionnaires were completed reflected the age at which pupils transferred from the primary to the secondary school. Therefore pupils transferring to schools A1, A2 and C4 completed these questionnaires at the end of year 6, whilst pupils who were transferring to

school B3 completed the questionnaires at the end of year 7. Details of the questionnaires completed by the pupils at each data collection point are shown in table 3.12.

Table 3.12

Summary of the Questionnaires Completed by Pupils at each Data Collection Point

School	End of year 6			Beginning of year 7			End of year 7			Beginning of year 8		
Pri / Sec	SE	SM	A	SE	SM	A	SE	SM	A	SE	SM	A
A1a / A1	•	•	•	•	•	•	•	•	•	•	•	•
A1b / A1	•	•	•	•	•	•	•	•	•	•	•	•
A1c / A1	•	•	•	•	•	•	•	•	•	•	•	•
A1d / A1	•	•	•	•	•	•	•	•	•	•	•	•
A2e / A2	•	•	•	•	•	•						
B3f / B3	•	•		•	•		•	•	•	•	•	•
C4g / C4	•	•	•	•	•	•	•	•	•	•	•	•
C4h / C4	•	•	•	•	•	•	•	•	•	•	•	•

Pri = Primary or combined school attended Sec = Secondary school attended

SE = Self-esteem questionnaire SM = Self-motivation questionnaire

A = Attitudes questionnaire

Questionnaires were coded and distributed by the researcher prior to the start of the lesson. Following an explanation by the researcher, the pupils completed the questionnaires. Where possible those pupils identified by their school as having learning difficulties associated with reading / writing were given further assistance by the class teacher. Where further explanation was required the researcher provided clarification but did not lead the pupils in their response. Once questionnaires had been completed pupils were asked to check that they had answered all questions and that they had only ticked one answer for each question. Questionnaires were then returned to the researcher who checked that all questions had been answered. If there were any questions unanswered pupils were asked to answer them. Once all questionnaires had been collected, pupils were taught their physical education lesson.

3.7.2 Observation / videoing of pupils' attainment

On each visit the physical education lesson was videoed for pupils' attainment. The lesson was videoed in order to produce a permanent record allowing

the researcher and an independent observer to analyse pupil's attainment after the lesson. Observations in schools A1a, A1b, A1c, A1d, A2e, B3f, C4g and C4h were of a standardised lesson taught either by the class teacher and videoed by the researcher, or taught by the researcher and videoed by the class teacher. The researcher taught the lesson where the class teacher was not confident enough to teach it. The researcher videoed the lesson when the class teacher taught the class, while the class teacher videoed the lesson when it was taught by the researcher. In schools A1, B3 and C4 observations were on timetabled physical education lessons, and taught by the class teacher with the researcher videoing. Table 3.13 provides a summary of who taught and who videoed each lesson.

Table 3.13

Summary of Classes Taught and Observed in Each School

School	End of year 6		Beginning of year 7		End of year 7		Beginning of year 8	
Pri /Sec	Teacher	Observer	Teacher	Observer	Teacher	Observer	Teacher	Observer
A1a/A1	R	T	T	R	T	R	T	R
A1b/A1	R	T						
A1c/A1	R	T						
A1d/A1	R	T						
A2e/A2	T	R						
B3f/B3	R	T	R	T	R	T	T	R
C4g/C4	T	R	T	R	T	R	T	R
C4h/C4	T	R						

Pri = Primary or combined school Sec = Secondary school

R = Researcher T = Class teacher

Observations took place in normal lesson time. However on the day on which data was scheduled to be collected, year 6 pupils from two of the primary schools were attending a physical education induction in the secondary school to which they were transferring. Therefore the physical education lesson was taught in the secondary school.

Pupils' attainment was assessed against the National Curriculum for physical education requirements. The attainment targets for physical education can be found

in appendix A. The researcher, the class teacher and an independent observer all gave levels of attainment to each pupil in the study using a criteria sheet based upon National Curriculum attainment targets for physical education. The researcher explained the criteria sheets with both teaching staff and the independent observer prior to completion. A video of each lesson observed was sent to the independent reviewer along with criteria sheets. The researcher and the observer completed analysis of the video independently. The attainment data provided by the class teacher were based on their knowledge and assessments of the pupils' attainment throughout the year, whilst the researcher and independent observer provided attainment based upon the observed lesson.

3.7.3 Interviews with Pupils

Interviews were conducted with pupils about their experience of physical education within both the primary school and secondary school, and also at their attitudes to changing or having changed school. This was used to support the data collected by means of the attitudes questionnaires (see 3.7.1). Interviews were conducted after the physical education lesson and involved a maximum of 3 participants per interview. Participants volunteered to be interviewed, following a request from the researcher. Interviews were audio-taped allowing transcription to be undertaken at a later date. Table 3.14 shows the number of interviews conducted and the number of subjects present at each interview.

Table 3.14

Table Showing the Number of Interviews Conducted during each Data Collection Point and the Number of Pupils Present

Data collection point	Number of Interviews conducted	Number of participants per interview
End of year 6	3	3
Beginning of year 7	3	3
End of year 7	2	3

3.7.4 Primary and Combined Teacher questionnaires

Staff in schools A1a, A1b, A1c, A1d, A2e, B3f, C4g and C4h were asked to complete a short questionnaire about their understanding of continuity and progression and the current links with the secondary school to which they sent the

majority of their pupils. This was completed during the observations conducted prior to pupils transferring to the secondary school. They were therefore completed at the end of year 6 for schools A1a, A1b, A1c, A1d, A2e, C4g and C4h, and the end of year 7 for school B3f, reflecting the different times of transfer.

3.7.5 Secondary Teacher interviews

Staff in schools A1, B3 and C4 were interviewed about their understanding of continuity and progression and the links with the primary / combined schools from which they received the largest number of pupils. Interviews took place at the end of year 7 in schools A1 and C4, and at the beginning of year 8 for school B3. The researcher conducted interviews during the same visit as pupil data was collected with interviews taking place after the lesson has been taught at a time convenient to the teacher. An audiotape of the interview was made for later transcription and analysis.

3.7.6 Data about schools and physical education

General information about each school and physical education within each school was collected from two sources: the OFSTED website, and from teachers at each school. OFSTED reports were retrieved from the OFSTED website (www.ofsted.gov.uk) to provide a general overview of the school, and any information regarding physical education obtained as a result of OFSTED inspections. Data from teachers was collected from schools A1a, A1b, A1c, A1d, A2e, C4g and C4h at the end of year 6, prior to transfer of pupils to the secondary school, and from schools A1, A2 and C4 at the beginning of year 7. This information was collected from school B3f at the end of year 7, and from school B3 at the beginning of year 8. Data sheets were issued to staff on the same day as data was collected from pupils. A stamped addressed envelope was provided for those members of staff that were unable to provide the information requested on the day.

3.8 Data analysis

Data analysis is the "process of making sense of the data" (Thomas & Nelson, 2001, p.340). The data collected was of two types, quantitative and qualitative.

3.8.1 Quantitative data analysis

Quantitative data is in numerical form. This numerical data can be analysed using a range of statistical techniques. Two forms of statistical analysis can be undertaken: parametric and non parametric. The appropriate form of analysis is determined by a number of factors; referred to as assumptions. If these assumptions are fulfilled, parametric analysis techniques are used. If the assumptions are violated, non-parametric analysis techniques are used. These are shown in table 3.15.

Table 3.15

Summary of the Assumptions Underlying Parametric Data Analysis

	Assumption for using parametric analysis
Randomness	• All subjects should be randomly selected • All data should be unbiased
Level of data	• Data should be continuous (or high level)
Normal distribution	• The sample will act in a similar way, and be normally distributed.
Homogeneity of variance	• The variables used in data analysis have a similar spread (variance) of scores

Randomness reflects the way in which the sample is selected and data collected. Randomness implies that some element of chance was used during selection and data collection, allowing for prediction of the actual sample to be limited. Further, that the sample was such that generalisations may be made a cross a wider population.

The level of data equates to the variables that are to be analysed. There are two distinct categories of data: Categorical data (or low level data) that assigns data into categories, for example gender; and Continuous (or high level data) for example, age. For parametric analysis continuous data is needed.

Normal distribution is reflected by a bell curve. In a normally distributed population individual scores fall within the parameters of this curve. Where this is not the case, the distribution of the scores will result in the curve becoming skewed, demonstrating variation in the symmetry of the distribution with the peak of the curve evident either to the right or the left of the normal distribution curve, or demonstrating kurtosis whereby the vertical distribution of the curve is either peaked or flat.

Homogeneity of variance concerns the spread of the scores (Clegg, 2001). Therefore it looks at how spread out (variant) the scores are. For data to be

parametric scores should be spread similarly, if this is not the case a non-parametric test is conducted.

The statistical tests that can be applied depend upon whether or not the assumptions are fulfilled (see table 3.14 and figure 3.2).

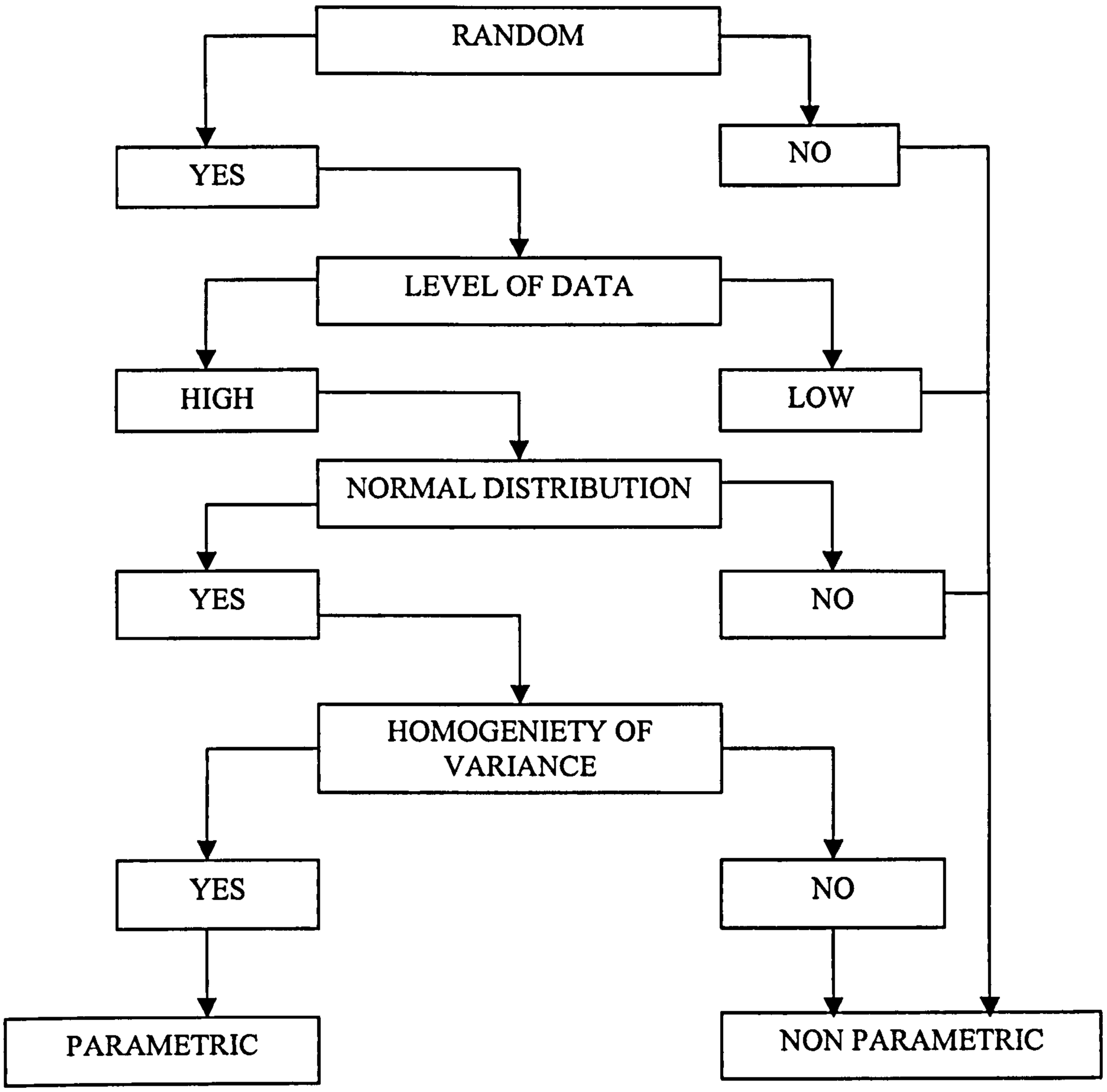

Figure 3.2 Choosing between parametric and non-parametric tests.

Parametric tests are used if the data fulfils the majority of the assumptions of randomness, high-level data, normal distribution and homogeneity of variance. Parametric tests are viewed as being more robust and powerful (Clegg, 2001). If the assumptions are not fulfilled analysis using non-parametric tests is undertaken.

Within any statistical analysis the opportunity for error arises. Two main types of error occur. Type I error occurs when the null hypothesis is wrongly rejected; thereby the researcher reports a difference between variables when this has not occurred. Type II error occurs when the null hypothesis is wrongly accepted, for example when the researcher reports that there is no difference between variables when in fact there is.

Reduction of these types of error occurs through the use of levels of significance or the *p*-value, for both relationships and differences tests (Pallant, 2003). Commonly levels of significance are set between 0.01 and 0.05 and show the degree to which results were obtained by chance. For example if the *p*-value is found to be less than 0.01, than it can be said that there is a 99% certainty that the results obtained were not obtained by chance; 0.05 would represent 95% certainty. Thus when looking at the results of any statistical analysis, it is important to establish whether the differences or relationships are significant.

The next section looks at the statistical analyse that can be undertaken.

3.8.2 Differences

Differences establish the degree to which the results differ. These differences can be between groups, over time or a combination of the two. Further, tests can look at one or more dependent variable. A dependent variable is one that changes as a result of manipulation. In contrast, an independent variable is the variable that is manipulated.

As with relationships, when reporting differences, it is important to establish whether differences are significant as shown by the *p* value. Whilst significance may be shown between the two variables, it does not indicate "the degree to which the two variables are associated with each other" (Pallant, 2003, p.175). This is achieved through the calculation of the effect size. The effect size shows the extent to which the dependent variable is affected as a result of the manipulation of independent variables, for example if looking at changes over time it will show how much of an influence time has on the other variables being tested. Table 3.16 shows the magnitude of different effect sizes.

Table 3.16

Effect Sizes

Effect size value	Size of the effect
.01	Small Effect
.06	Moderate Effect
.14	Large Effect

Table 3.17 summarises the main differences tests that can be used.

Table 3.17

Summary of Differences Tests

Parametric Test	Non parametric test	Used to analyse
Paired sample t-test (t)	Wilcoxon (Z)	Same sample tested twice
Independent sample t-test (t)	Mann Whitney U-test (Z)	Two groups tested on the same dependent variable
Analysis of variance ANOVA (F ratio)		Sample made up of two or more groups
Multivariate analysis of variance MANOVA (F ratio)		Sample including more than one dependent variable
Repeated Measures (F ratio)		Sample tested on more than one occasion

T-tests are used to analyse the difference between two groups on one occasion or when data is collected on more than one occasion. A number of tests can be applied. These are referred to as Paired samples and Independent Sample t-tests respectively.

A paired sample t-test is used when the same subjects "are measured on two occasions, or under two different conditions" (Pallant, 2003, p.181). The test is parametric and requires fulfilment of the assumptions. Thus the test may be used to analyse data from a sample pre and post intervention - looking for differences overtime. The non-parametric equivalent is the Wilcoxon Signed-Rank Test.

An independent Sample T-test is used "to compare the score, on some *continuous* variable, for *two* different groups of subjects" (Pallant, 2003, p.177). The test is parametric and requires data to consist of one independent variable consisting of two levels, and one dependent variable. The non-parametric equivalent is the Mann-Whitney U Test.

If multiple t-tests are used opportunities arise for type 1 error to occur. To reduce this more sophisticated tests referred to as ANOVA or MANOVA can be used. ANOVA's compare variations in scores between groups, with variations within groups. The resulting calculation is referred to as the F ratio. This value is significant if the *p* value falls below 0.05. To apply the test, data needs to consist of one categorical or continuous independent variable consisting of 3 or more categories, and one continuous dependent variable. To identify where significant differences occur, post hoc tests or planned comparisons are conducted. As with t-tests, effect sizes are calculated to demonstrate the magnitude of difference.

MANOVA builds upon the ANOVA where there is more than one dependent variable. If multiple ANOVA's are conducted on the same data, it will result in type I error. MANOVA reduces type I error. Results of MANOVA's also identify the F ratio. Further analysis using post hoc tests or planned comparisons show where significant differences occur between different groups.

Repeated measures can be used on both ANOVA's and MANOVA's. The technique is used when data has been collected from the same group on more than one occasion. An F ratio is calculated.

3.8.3 Relationships / Correlations

Relationships / correlations look at the extent to which one variable may influence another and therefore the degree of association between variables. Vincent (1995) defines correlation as a "numerical coefficient that indicates the extent to which two variables are related" (p.88). Pallant (2003), states that correlations are "used to describe the strength and direction of linear relationship between two variables" (p.115). Thus they identify the extent to which one variable is related to a second, identified as a correlation value.

Correlation values fall within the range of plus 1 to minus 1. Relationships may be positive (0 to +1), i.e. when one variable increases so does the other, or negative (0 to –1), i.e. when one variable increases the other decreases. According to Muijs (2004) the magnitude of the correlation are shown in Table 3.18.

Table 3.18

Summary of the Magnitude of Correlations

Positive values	Negative values	Magnitude
0 to .09	0 to -.09	Weak
.10 to .29	-.10 to -.29	Modest
.30 to .49	-.30 to -.49	Moderate
.50 to .79.	-.50 to -.79	Strong
.80 to 1	-.80 to -1	very strong

There are two main tests for correlations and these are described below.

3.8.3.1 Pearson Product-Moment Correlation Coefficient (r)

Pearson product-moment correlation coefficient is a parametric test, and therefore can only be used when the four assumptions have been fulfilled. It looks at the relationships in respect of its linearity (straight line relationship) and strength between groups with continuous variables.

3.8.3.2 Spearman's Rank Order Correlation (rho / rs)

Spearman's rank order correlation is a non-parametric relationships test and as such is used instead of Pearson's Product – Moment Correlation when the four assumptions are violated.

3.8.3.3 Multiple regressions

Multiple regressions are "used to explore the relationship between one continuous dependent variable and a number of independent variables or predictors" (Pallant, 2004, p.134). It is therefore a more sophisticated correlation than Pearson Product-Moment and Spearman's Rank Order Correlations that allows for the identification of interrelationships between variables.

3.8.4 Quantitative Data Analysis used in this study

Means, standard deviations and frequencies were calculated using the Statistical Package for the Social Sciences for attainment, self-esteem and self-motivation, overall, for boys and girls, for pupils who changed school at the end of year 6 and pupils who changed school at the end of year 7, and for pupils who

attended the different secondary schools involved in the study, at each of the four data collection points.

Data was categorised as shown in table 3.19

Table 3.19

Types of data collected

Variables	Category of data Categorical / Continuous	 Dependent / Independent
Gender	Categorical	Independent
Age of Transfer	Categorical	Independent
School Attended	Categorical	Independent
Attainment	Continuous	Dependent
Self-Esteem	Continuous	Dependent
Self-Motivation	Continuous	Dependent

Wilcoxon signed-rank tests were used to identify whether there were any significant differences in attainment, self-esteem and self-motivation between the end of year 6 and the beginning of year 8 for all pupils involved in the study. ANOVA's were conducted to find whether there were any significant differences in attainment, self-esteem and self-motivation between boys and girls, between pupils who changed school at the end of year six and pupils who changed school at the end of year 7, and between pupils who attended different schools, at each of the 4 collection points. For those pupils from whom data was collected at all 4 data collection points, analysis was conducted using a repeated-measures ANOVA.

Spearman's rank order and Pearson's product moment correlations were conducted to establish whether there were significant relationships between:

- Self-esteem and self-motivation;
- Self-esteem and attainment;
- Self-motivation and attainment.

Analysis was conducted for all pupils, for boys and girls, for pupils who changed school at the end of year 6 and pupils who changed school at the end of year 7, and pupils who attended the different secondary schools involved in the study. Variation in the test used reflected fulfilment of the assumptions underlying parametric analysis. Standard multiple regressions were conducted to establish

whether self-esteem could be predicted as a result of attainment and self-motivation. Analysis was conducted at each of the four data collection points.

3.8.5 Qualitative data analysis

The nature of qualitative data means that it is presented in predominantly discursive rather than numerical form. To allow for further analysis and interpretation of the data, the data needs to be ordered. Consensus of opinion (Becker, 1958; Glaser & Strauss, 1967; McKernan, 1991) focuses on the adoption of the following processes. Data is edited by reading and rereading to identify common and emerging themes. These themes are pulled together in categories. These categories are then used in qualitative form to focus of the reporting of results. Alternatively, following assignment of categories, the categories are coded allowing them to be assigned numerical form. These coded categories are then analysed using quantitative techniques.

The nature of the attitudinal data collected from pupils and the questionnaire and interview data collected from staff, resulted in a range of data analysis being conducted. These are outlined in the next section of this chapter.

3.8.5.1 Attitudes towards physical education between the end of year 6 and the beginning of year 8.

Six closed questions were included in this analysis. All questions were pre-coded with participants providing either a positive (yes) or negative (no) response. The frequency of responses was calculated using SPSS. A repeated measures MANOVA was conducted using longitudinal data to establish whether there were any significant differences in responses over time, with time acting as the repeated measure, gender as the independent variable and questionnaire responses as the dependent variable.

3.8.5.2 Attitudes to changing school

Data collected from open-ended questions in respect of changing schools, was collected at the end of year 6 for pupils who changed school at age 11, and at the end of year 7 for pupils who changed school at age 12. This data was read thoroughly and responses recorded. Common themes were identified resulting in the formation of 10 categories of responses that pupils were looking forward to on transfer to

secondary school and 12 categories of responses that they were not looking forward to. These categories are shown in table 3.20.

Table 3.20

Questionnaire Coding Categories for what Pupils Were and Were Not Looking Forward to on Transfer to the Secondary School

	Looking forward to		Not looking forward to
1	Activities	1	Activities
2	Extra-curricular	2	Homework
3	Time	3	Time
4	Academic	4	Academic
5	Equipment	5	Not good enough
6	Changing	6	Changing
7	Social	7	Friendship
8	Challenges	8	Staff
9	Everything	9	Nothing
10	Nothing	10	Repetition
		11	Uniform
		12	Everything

3.8.5.3 Attitudes to physical education on transfer to secondary school

Questionnaires, specifically looking at the transfer from primary to secondary school, were administered either at the beginning of year 7 for those pupils who changed school at age 11, or at the beginning of year 8 for those pupils who changed school at age 12. Closed questions were pre-coded with either a positive (yes) or negative (no) response applicable. The frequency of responses was calculated using SPSS.

3.8.5.4 Attitudes to physical education within the secondary school

Data regarding attitudes to physical education within the secondary school was collected at the end of the first year (end of year 7) and the beginning of the second year (beginning of year 8) in the secondary school for those pupils who changed school at the end of year 6. Data was collected through open-ended questions. Responses reflected what pupils liked, disliked and would change about physical education in the secondary school. Responses were recorded and read to establish common themes. The same nine categories of responses were identified for all three questions (see table 3.21). Responses were re-read and coded according to the categories identified. Frequencies of responses were then calculated.

Table 3.21

Coding Categories for What Pupils Liked, Disliked and would Change about Physical Education in the Secondary School as Collected using Questionnaires

Curriculum: including activities, learning
Enjoyment: including fun, good, enjoyable
Physical: including improving fitness, exercise
Break: including different from other subjects, not sitting down, not having to write
Challenge: including working hard, difficulty of skills
Social: including friends, performance in front of others
Nothing:
Teachers:
Everything:
Environment: including weather, facilities.

3.8.5.5 Attitudes to physical education interview data

Data collected as a result of interviews with pupil was qualitative in its nature. The design of the interviews was such that questions asked were focussed around specific aspects. Thus individual responses were reported for the questions asked.

3.8.5.6 Primary and Combined Teacher questionnaires

The teacher questionnaire contained open-ended questions. These focussed on teacher's understanding of continuity and progression and their current links with the secondary schools to which they sent the majority of their pupils. Therefore qualitative analysis was used, with individual responses reported for each of the questions.

3.8.5.7 Secondary Teacher interviews

Data collected as a result of interviews with secondary school heads of physical education was qualitative in its nature. The design of the interviews was such that questions asked were focussed around specific aspects. Thus individual responses were reported for the questions asked.

3.8.5.8 Documentary Analysis

OFSTED reports were read and data extracted from the documents regarding the type of school, the age range of the pupils, the number of pupils attending the school and general attitudes towards school and more specifically towards physical education. As the focus of the data was specific around these aspects they were reported as individual responses.

3.9 Chapter summary

Within educational research, a wide range of research methods, data collection and analysis methods can be employed. The aim of this chapter has been to give an overview of such methods and specifically the research and data analysis methods employed during this study. Issues that arose as a result of the initial pilot study were identified, with subsequent methodological adaptations acknowledged.

The next chapter looks at the results of the study.

Chapter 4: Results

4.1 Introduction

The purpose of this study was to investigate changes in pupils' attainment, self-esteem, self-motivation, and attitudes towards physical education during the transition from primary to secondary school. It sought to look at differences between boys and girls, between pupils who changed school at the end of year 6 compared with those pupils who did not change school until the end of year 7, and between the secondary schools to which pupils transferred.

Further, data was analysed to establish whether significant relationships were evident between attainment and self-esteem, attainment and self-motivation and self-esteem and self-motivation. The extent to which schools promoted continuity and progression during the transfer from primary to secondary school, and the links currently in place to aid this transfer were also analysed.

This chapter is therefore divided into 6 key sections:

4.2 Attainment

4.3 Self-esteem

4.4 Self-motivation

4.5 Relationships between attainment and self-esteem, attainment and self-motivation and self-esteem and self-motivation

4.6 Attitudes

4.7 Continuity and progression.

Wilcoxon signed-rank tests were used to identify whether there were any significant differences in attainment, self-esteem and self-motivation between the end of year 6 and the beginning of year 8 for all pupils involved in the study. ANOVA's were conducted to find whether there were any significant differences in attainment, self-esteem and self-motivation between boys and girls, between pupils who changed school at the end of year six and pupils who changed school at the end of year 7 and between pupils who attended different schools, at each of the 4 collection points. For those pupils from whom data was collected at all 4 data collection points, analysis was conducted using a repeated-measures ANOVA.

Spearman's rank order and Pearson's product moment correlations were conducted to establish whether there were significant relationships between:

- Self-esteem and self-motivation;

- Self-esteem and attainment;
- Self-motivation and attainment.

Analysis was conducted for all pupils, for boys and girls, for pupils who changed school at the end of year 6 and pupils who changed school at the end of year 7, and pupils who attended the different secondary schools involved in the study. Variation in the test used reflected fulfilment of the assumptions underlying parametric analysis.

Qualitative data from pupil questionnaire and interview responses were analysed using data reduction techniques. From this, means and standard deviations were calculated, with individual responses reported where appropriate. A repeated measures MANOVA was conducted using longitudinal data to establish whether there were any significant differences in responses over time, with time acting as the repeated measure, gender as the independent variable and questionnaire responses as the dependent variable.

Interviews were transcribed, and reported accordingly. Teacher questionnaire and interview data was analysed with individual responses reported. Specific data was recorded from the school's most recent OFSTED report, allowing for specific facts to be recorded.

4.2 Attainment

Means and standard deviation for attainment were calculated for all pupils at the end of year 6, beginning of year 7, end of year 7 and the beginning of year 8. These are shown in figure 4.1 and table 4.1.

Table 4.1

Means, Standard Deviations and Significant Differences of Attainment Between the End of Year 6 and the Beginning of Year 8 for All Pupils as well as Between Boys and Girls, Pupils who Changed School at the End of Year 6 compared with Pupils who Changed School At The End of Year 7, and The Secondary Schools to which Pupils Transferred

		End of year 6				Beginning of year 7				End of year 7				Beginning of year 8			
		N	M	SD	F	N	M	SD	F	N	M	SD	F	N	M	SD	F
All pupils		129	3.52	.57		105	3.50	.71		250	4.80	.78		133	4.48	.84	
Gender	Boys	66	3.79	.53		74	3.59	.77		140	5.00	.81		64	4.80	.89	
					39.99**				5.12**				23.15**				21.33**
	Girls	63	3.23	.47		31	3.26	.44		110	4.54	.66		69	4.18	.66	
Age of	11	89	3.56	.51		75	3.39	.70		231	4.82	.76		101	4.51	.84	
Transfer					1.20				6.48*				3.58				10.51**
	12	40	3.44	.68		30	3.77	.68		19	4.47	.96		32	4.08	.67	
School attended	A1	58	3.56	.53		16	3.31	.48		76	4.27	.49		71	4.74	.87	
	A2	9	3.54	.41													
					.40				3.33*				39.78**				8.73**
	B3	40	3.44	.68		30	3.77	.68		19	4.47	.96		32	4.08	.67	
	C4	22	3.55	.53		59	3.41	.75		155	5.10	.72		30	4.30	.70	

**significant $p<0.01$

*significant $p<0.05$

Results, using Wilcoxon Signed Rank test, showed an overall increase in the attainment between the end of year 6 and the beginning of year 8. This increase was found to be significant [Z = -3.32; p <.01]. However as table 4.1 shows, this overall increase was not achieved consistently. Between the end of year 6 and the beginning of year 7 attainment fell; followed by an increase during year 7. Between the end of year 7 and the beginning of year 8 there was a decrease in level of attainment was again shown. Thus whilst the overall increase in attainment was found to be significant, analysis of individual time periods were not found to be significant.

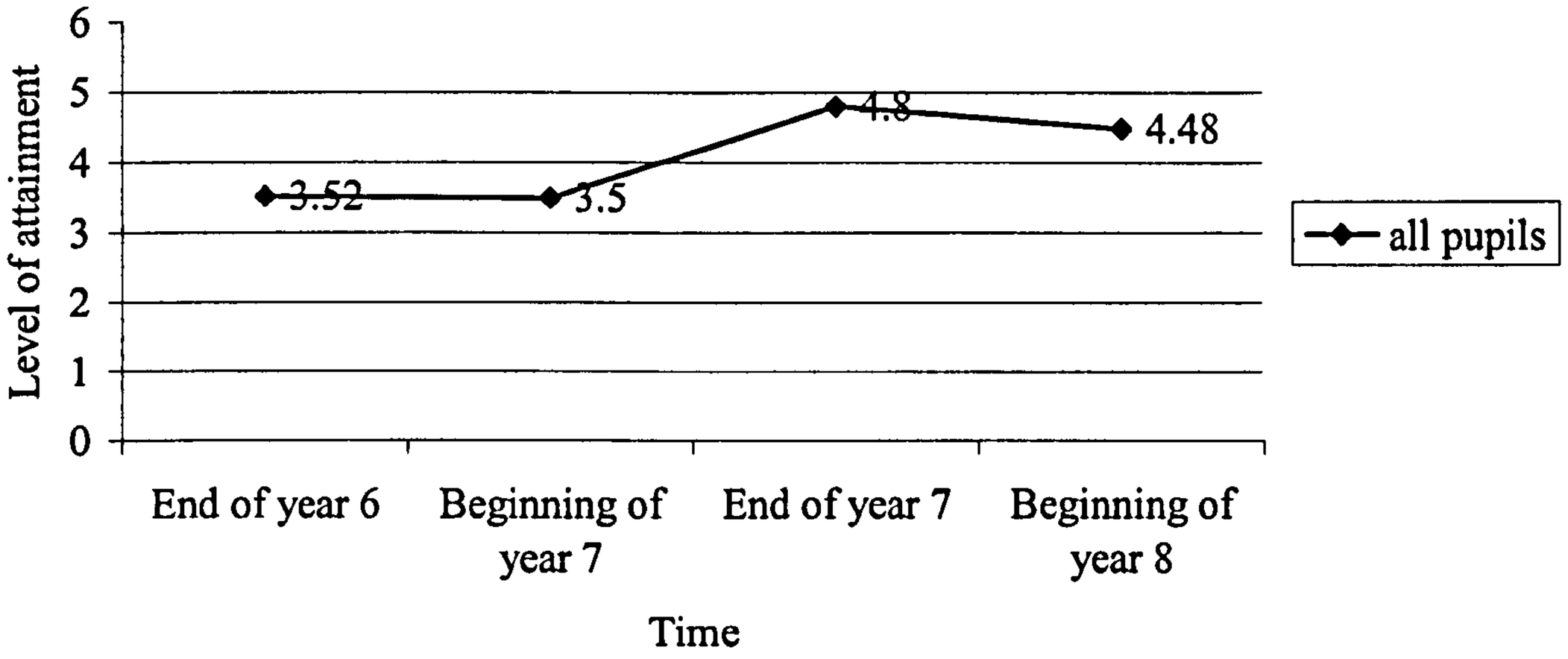

Figure 4.1 Attainment between the end of year 6 and the beginning of year 8.

4.2.1 Attainment between boys and girls

Results using a one-way ANOVA showed that boys consistently demonstrated significantly higher attainment than girls. These are shown in table 4.1 and figure 4.2. At the end of year 6, there was a significant difference in attainment [F (1, 127) = 39.99; p <.01], between boys and girls. Between the end of year 6 and the beginning of year 7, boys showed a decline in attainment. This was in contrast to girls who showed a slight increase. However there remained a significant difference between boys and girls at this time [F (1, 103) = 5.12; p <.05]. During year 7 attainment increased in both boys and girls, although a significant differences between boys and girls [F (1, 248) = 23.15; p <.01] attainment remained. However, between the end of year 7 and the beginning of year 8 there were decreases in levels of attainment in both boys and girls, with girls demonstrating the larger decrease.

Significant differences [F (1, 132) = 21.33; p <.01] were maintained between boys and girls in respect of attainment.

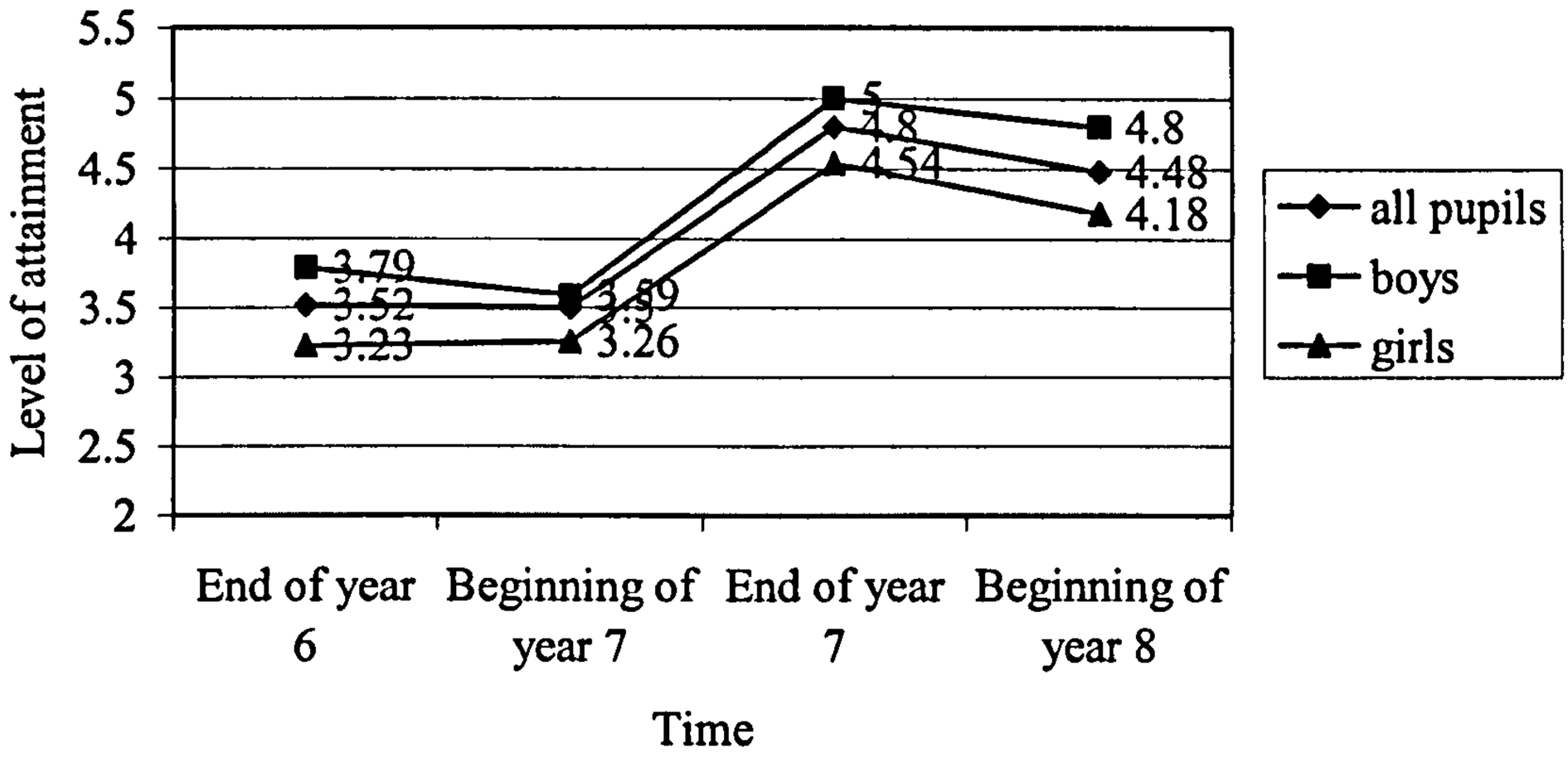

Figure 4.2 Attainment between the end of year 6 and the beginning of year 8 in boys and girls.

4.2.2 Attainment between pupils who changed school at age 11 and those pupils who changed school at age 12

Results showed differences in attainment in pupils who changed school at the end of year 6 (age 11) compared with pupils who changed school at the end of year 7 (age 12), (see table 4.1 and figure 4.3). At the end of year 6 those pupils who changed school showed higher attainment than those pupils who had remained in the same school, but these differences were not significant. Between the end of year 6 and the beginning of year 7 there was a decrease in attainment for pupils who changed school at age 11, in contrast to the increase for pupils who changed school at age 12. The difference in attainment at the beginning of year 7 between pupils who had changed school compared to those who had remained in the same school was found to be significant [F (1,107) = 6.48; p < .01], with those pupils who remained in the same school showing significantly higher attainment that those who had changed school. During year 7 there was an increase for all pupils in attainment, although pupils who changed school at age 11 showed a greater increase than those pupils who change school at age 12. There were no significant differences in attainment between the two groups. Between the end of year 7 and the beginning of year 8 there was a decrease in attainment for all pupils. There were significant differences in

attainment between pupils who changed school at the end of year 6 and pupils who changed school at the end of year 7 and those who changed at the beginning of year 8, [F (1, 132) = 10.51, p <.01]. Pupils who had changed school at the end of year 6 showed significantly higher attainment than pupils who had changed school at the end of year 7.

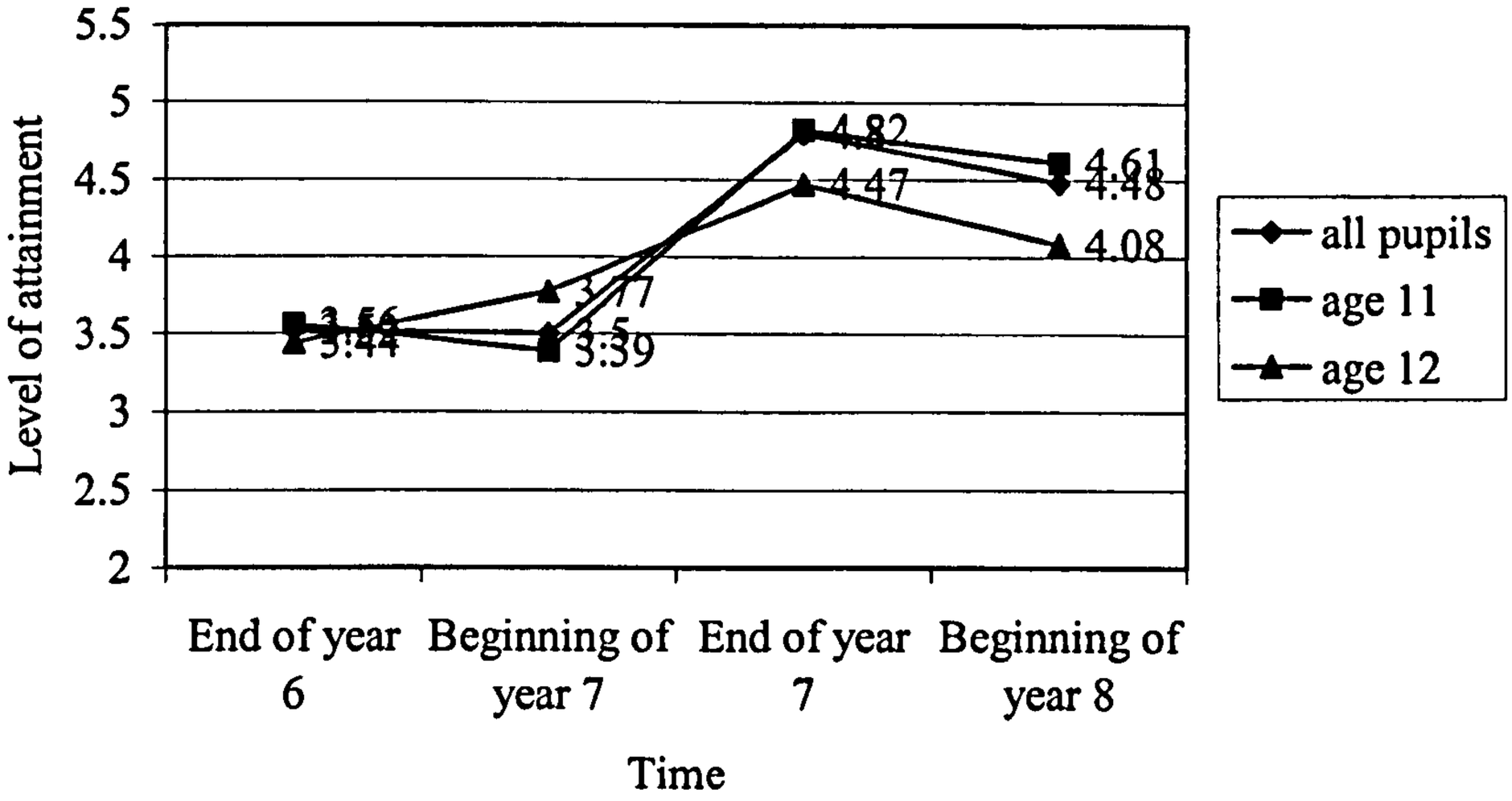

Figure 4.3 Attainment between the end of year 6 and the beginning of year 8 in pupils who changed school at the end of year 6 and those pupils who changed school at the end of year 7.

4.2.3 Attainment between pupils who transferred to the secondary schools involved in the study

At the end of year 6 there were no significant differences in the attainment shown by the pupils who transferred to each of the four secondary schools involved in the study. However, at the beginning of year 7, pupils in school B3 showed significantly higher attainment than pupils in school A1 and C4, [F (2, 102) = 3.33, p < .05]. Pupils in schools A1 and C4 demonstrated a decline in attainment between the end of year 6 and the beginning of year 7, contrasting to an increase in attainment shown by pupils in school B3. By the end of year 7 attainment for all pupils had increased. However pupils in school C4 showed significantly higher attainment than other pupils in school A1 and B3 [F (2, 247) = 39.78, p <.01]. At the beginning of year 8, pupils in school B3 and C4 showed lower attainment than they had achieved at the end of year 7. This was in contrast with pupils in school A1 who showed an

increase in attainment. Differences in attainment between schools were found to be significant [F (2, 130) = 8.73, p >.01].

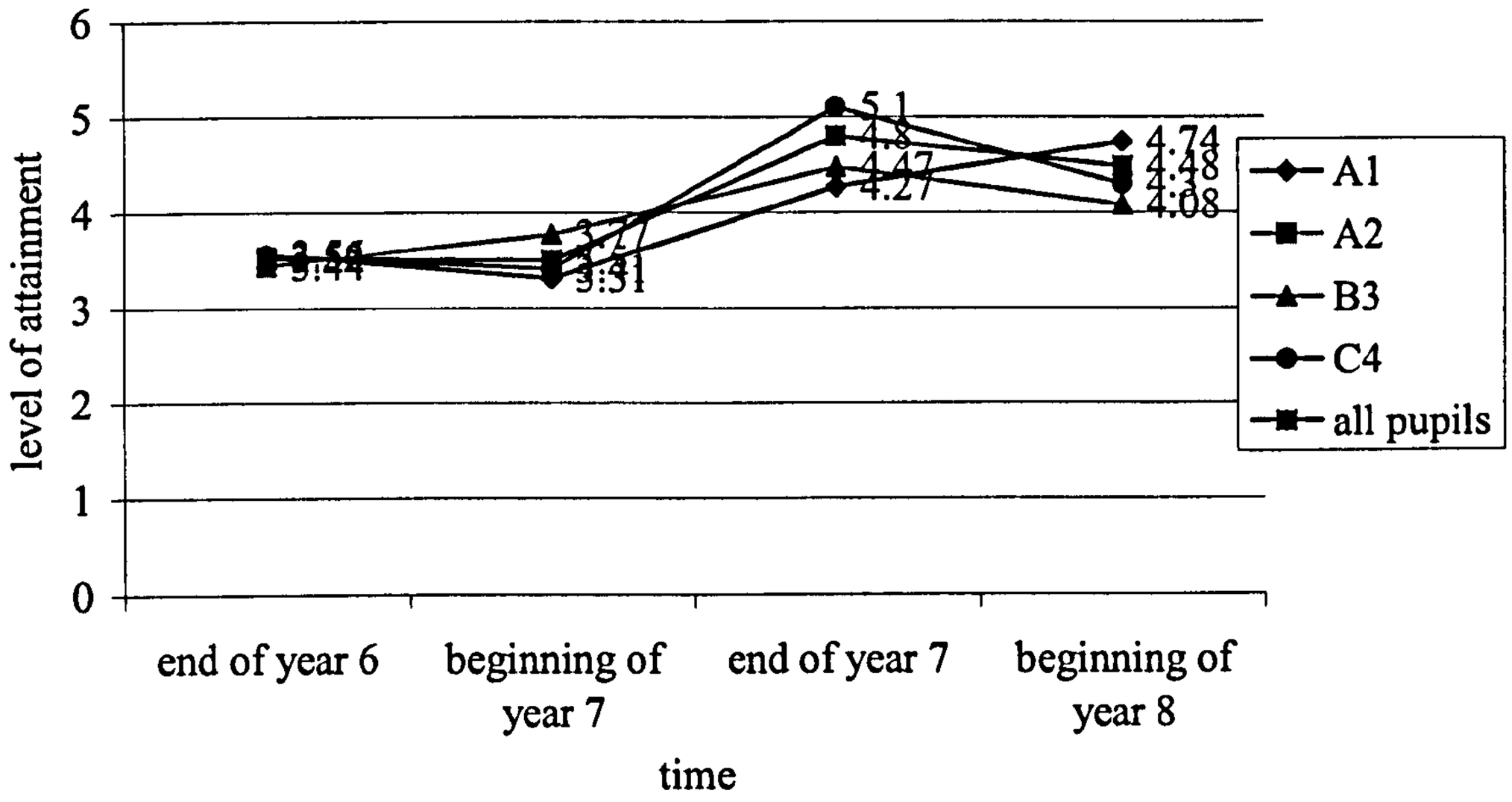

Figure 4.4 Attainment between the end of year 6 and the beginning of year 8 for pupils attending the different secondary schools involved in the study.

Table 4.2

Means, Standard Deviations and Significant Differences in Attainment for Pupils from whom Data was collected at All Four Data Collection Points

		End of year 6			Beginning of year 7			End of year 7			Beginning of year 8			
		N	M	SD	N	M	SD	N	M	SD	N	M	SD	F
All pupils		28	3.71	.67	28	3.57	.69	28	4.63	.85	28	4.71	.82	27.92**
Gender	Boys	17	3.97	.68	17	3.82	.73	17	4.79	.77	17	4.85	.79	
														.52
	Girls	11	3.31	.44	11	3.18	.40	11	4.36	.92	11	4.50	.87	
Age of Transfer	11	16	3.65	.53	16	3.31	.48	16	4.59	.66	16	4.91	.88	
														.00
	12	12	3.79	.84	12	3.92	.79	12	4.67	1.07	12	4.46	.69	
School attended	A1	13	3.69	.55	13	3.38	.51	13	4.42	.57	13	4.73	.86	
	B3	3	3.50	.50	3	3.67	.00	3	5.33	.58	3	4.00	.00	3.00
	C4	12	3.79	.84	12	3.92	.79	12	4.67	1.07	12	4.45	.69	

**significant $p<0.01$
*significant $p<0.05$

4.2.4 Longitudinal changes to attainment in respect of gender, age of transfer and school attended

Additional analysis was conducted on those pupils for whom data had been collected at all of the four data collection points (N = 28). Results are shown in table 4.2. A repeated measures ANOVA showed that there was no significant interaction between time, gender, age of transfer and school attended. However, there was a significant difference in respect of time [F (3, 22) = 27.92, $p < .01$; Wilks Lambda = .19; $\eta^2 = .81$], showing that attainment increased significantly between the end of year 6 and the beginning of year 8 in all pupils.

4.2.5 Summary

There was a significant increase in attainment between the end of year 6 and the beginning of year 8. Boys demonstrated significantly higher attainment than girls. Further, declines in attainment were evident in pupils when a change of school was experienced either at the end of year 6 and the end of year 7, although during the year increases were evident. Significant differences were evident in attainment between pupils attending the 3 different secondary schools involved in the study, at the beginning of year 7, the end of year 7 and the beginning of year 8.

Results for those pupils for whom data was available at all four data collection points showed significant increases in attainment between the end of year 6 and the beginning of year 8, although there were no significance differences in respect of gender, age of transfer and secondary school attended.

4.3 Self-esteem

Means and standard deviations were calculated for all pupils for self-esteem at the end of year 6 the beginning and end of year 7 and the beginning of year 8. Results for self-esteem are shown in table 4.3 and on figure 4.5

Table 4.3

Means and Standard Deviations for Self-Esteem Between the End of Year 6 and the Beginning of Year 8 Including Differences Between Boys and Girls, Pupils who Changed School at the End of Year 6 Compared with Pupils who Changed School at the End of Year 7, and the Secondary Schools to which Pupils Transferred, Showing any Significant Differences

		End of year 6				Beginning of year 7				End of year 7				Beginning of year 8			
		N	M	SD	F	N	M	SD	F	N	M	SD	F	N	M	SD	F
All pupils		221	6.94	2.08		299	7.13	2.29		284	7.23	2.18		270	7.51	2.03	
Gender	Boys	113	7.35	1.93		166	7.35	2.20		164	7.64	1.94		150	7.88	1.86	
					4.23*				4.35*				9.43**				12.26**
	Girls	108	6.51	2.16		133	6.86	2.38		120	6.68	2.36		120	7.06	2.14	
Age of	11	183	7.02	2.09		255	7.36	2.09		245	7.35	2.09		232	7.58	1.97	
Transfer					1.55				16.23**				2.47				.58
	12	38	6.55	3.03		44	5.78	2.91		39	6.5	2.59		38	7.12	2.35	
Secondary school attended	A1	89	7.22	2.06		77	7.41	2.32		65	7.27	2.01		64	7.38	2.01	
	A2	21	7.14	1.31		9	8.22	1.15									
					1.27				6.80**				2.66				1.30
	B3	38	6.55	2.03		44	5.78	2.91		39	6.50	2.59		38	7.12	2.35	
	C4	73	6.74	2.29		169	7.29	2.01		180	7.38	2.12		168	7.66	1.95	

**significant $p<0.01$

*significant $p<0.05$

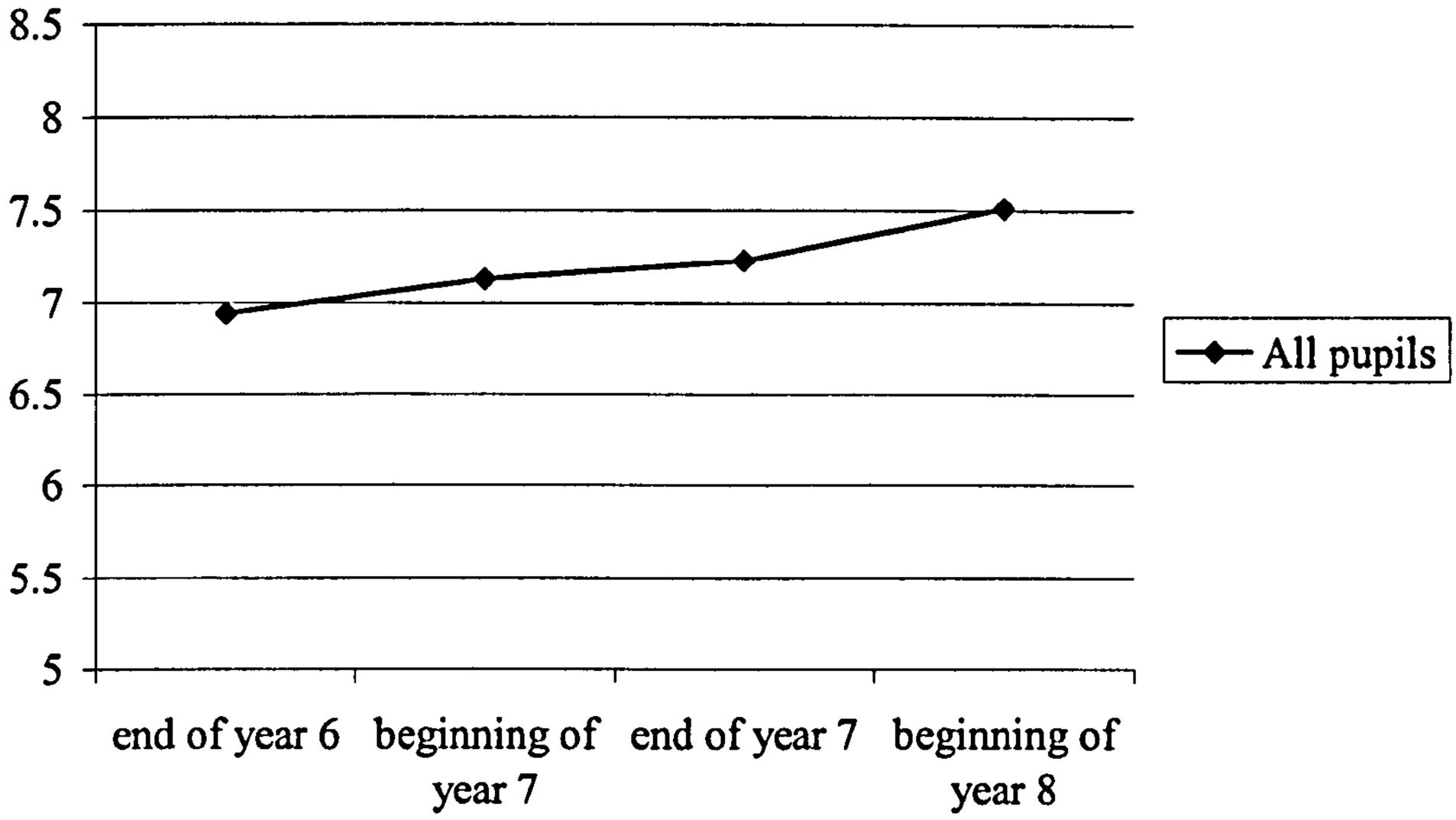

Figure 4.5 Self-esteem between the end of year 6 and the beginning of year 8.

Results showed an increase in self-esteem for all pupils, between the end of year 6 (6.94), the beginning of year 7 (7.13), the end of year 7 (7.23) and the beginning of year 8 (7.51). However these increases were not significant.

4.3.1 Self-esteem between boys and girls

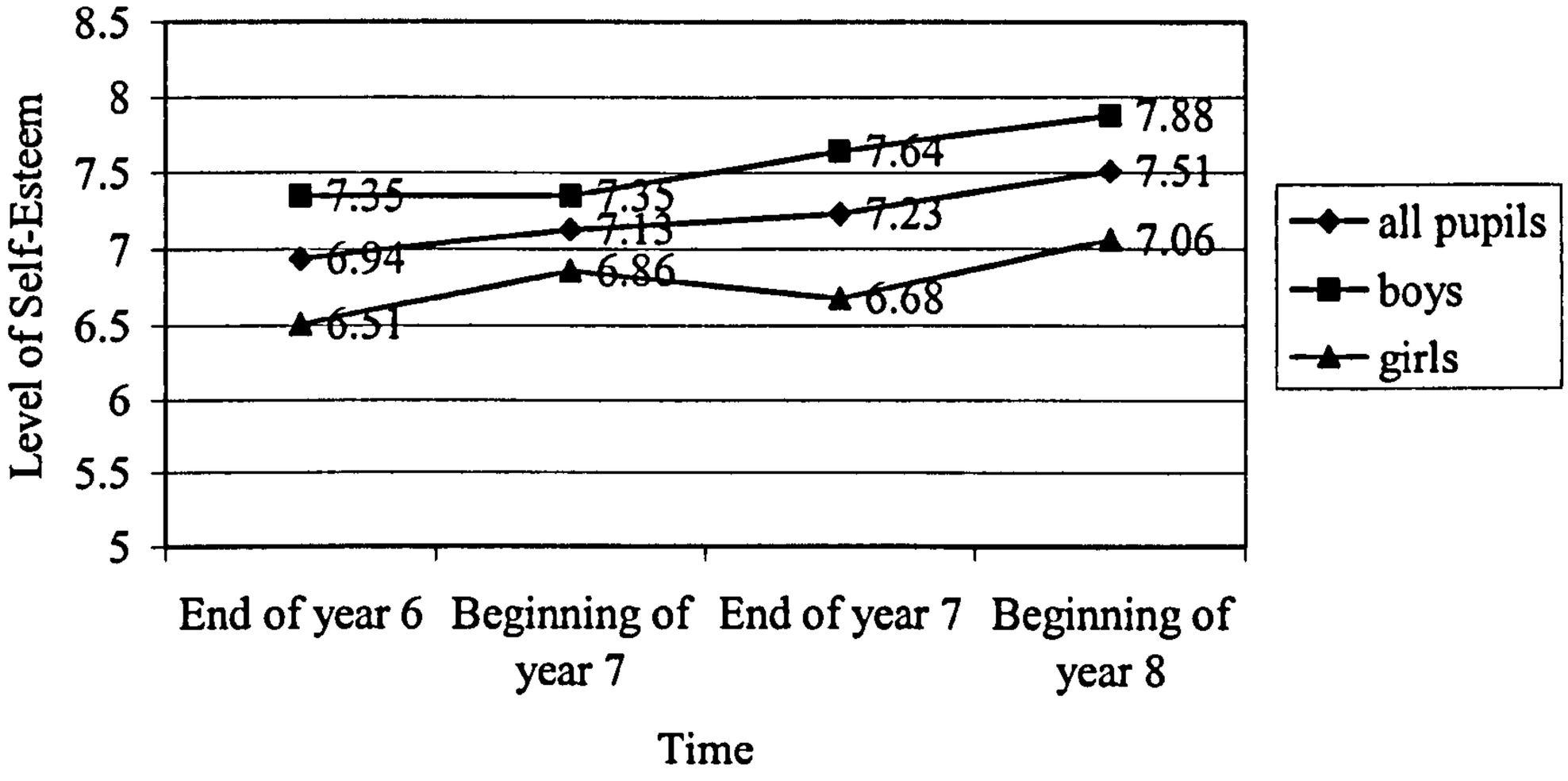

Figure 4.6 Self-esteem between the end of year 6 and the beginning of year 8 between boys and girls.

Table 4.3 and Figure 4.5 shows that boys had significantly higher self-esteem than girls at the end of year 6 [F (1, 221) = 4.23, p <.05], the beginning of year 7 [F

(1, 299) = 4.35, $p<.05$], the end of year 7 [F (1, 284) = 9.43, $p<.01$], and the beginning of year 8 [F (1, 270) = 12.26, $p<.01$].

Between the end of year 6 and the beginning of year 8, boys showed a continuous increase in self-esteem. In comparison girls showed an increase in self-esteem between the end of year 6 (6.51) and the beginning of year 7 (6.86), with a decrease in self-esteem at the end of year 7, although self-esteem at the end of year 7 (6.68) was higher than it had been at the end of year 6. This decline was reversed by the beginning of year 8 with self-esteem increasing to 7.06.

4.3.2 Self-esteem in respect of pupils who changed school at the end of year 6 compared with pupils who changed school at the end of year 7

Self-esteem in respect of the age at which pupils changed school are shown in table 4.3 and figure 4.6.

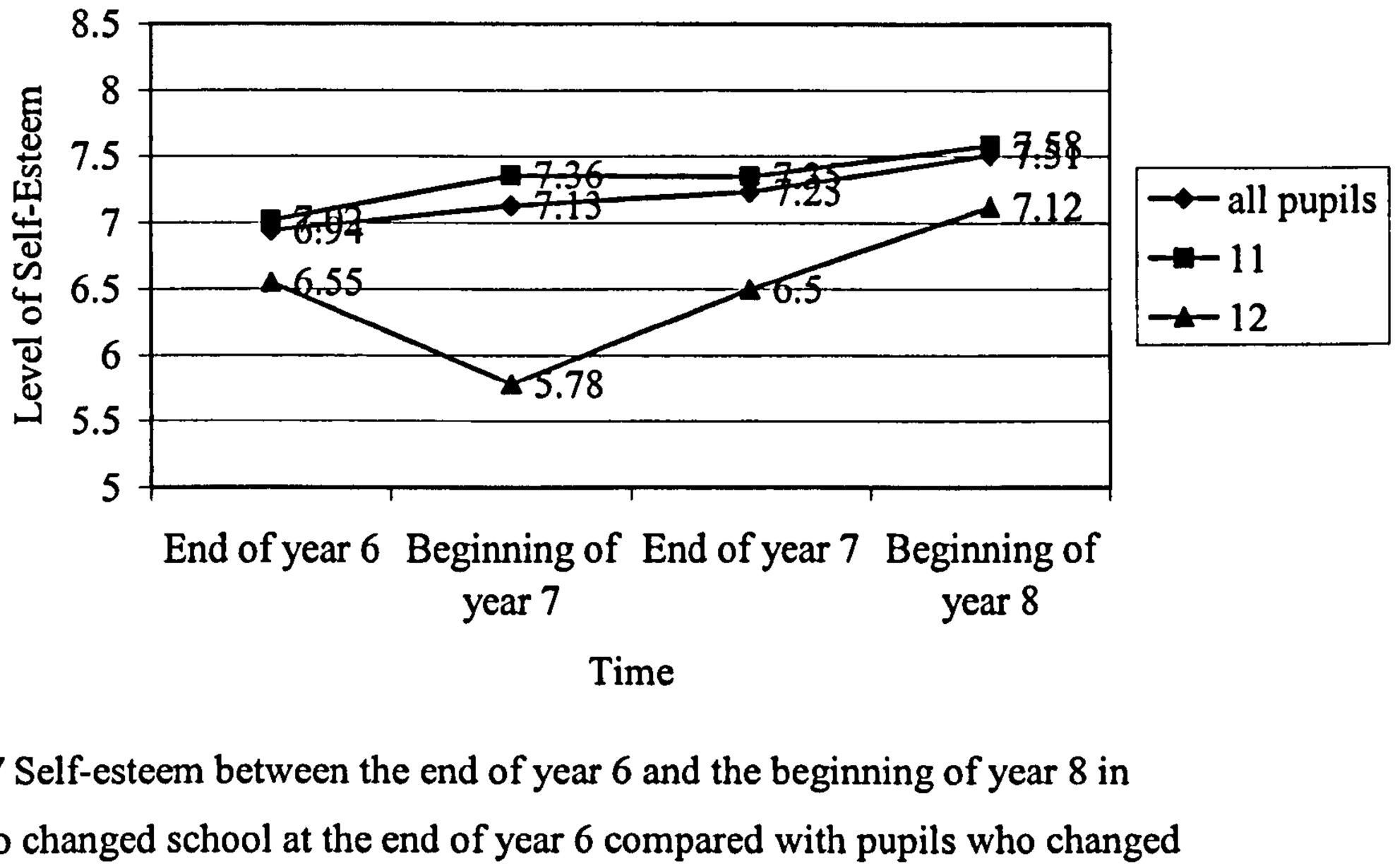

Figure 4.7 Self-esteem between the end of year 6 and the beginning of year 8 in pupils who changed school at the end of year 6 compared with pupils who changed school at the end of year 7.

Pupils who changed school at age 11, showed higher self-esteem (7.02) at the end of year 6 than those who changed school at age 12 (6.55) although this difference was not significant. Pupils who changed school at age 11 showed an increase in self-esteem between the end of year 6 (7.02) and the beginning of year 7 (7.36). This was in contrast to pupils who stayed within the same school between the end of year 6 and the beginning of year 7, who showed a decline in self-esteem from

the end of year 6 (6.55) to the beginning of year 7 (5.78). The differences in self-esteem at the beginning of year 7 between pupils who had and had not changed school were found to be significant [F (1, 299) = 16.23; $p < .01$].

During year 7, pupils who changed school at age 11 showed a very slight decrease in self-esteem (7.36 - 7.35). In comparison pupils who changed school at age 12 showed an increase (5.78 - 6.50). Between the end of year 7 and the beginning of year 8, self-esteem of both pupils who changed school at age 11 (7.35 - 7.58) and pupils who changed school at age 12 (6.50 - 7.12) increased. However there were no significant differences between the two groups.

4.3.3 Self-esteem in respect of secondary school attended

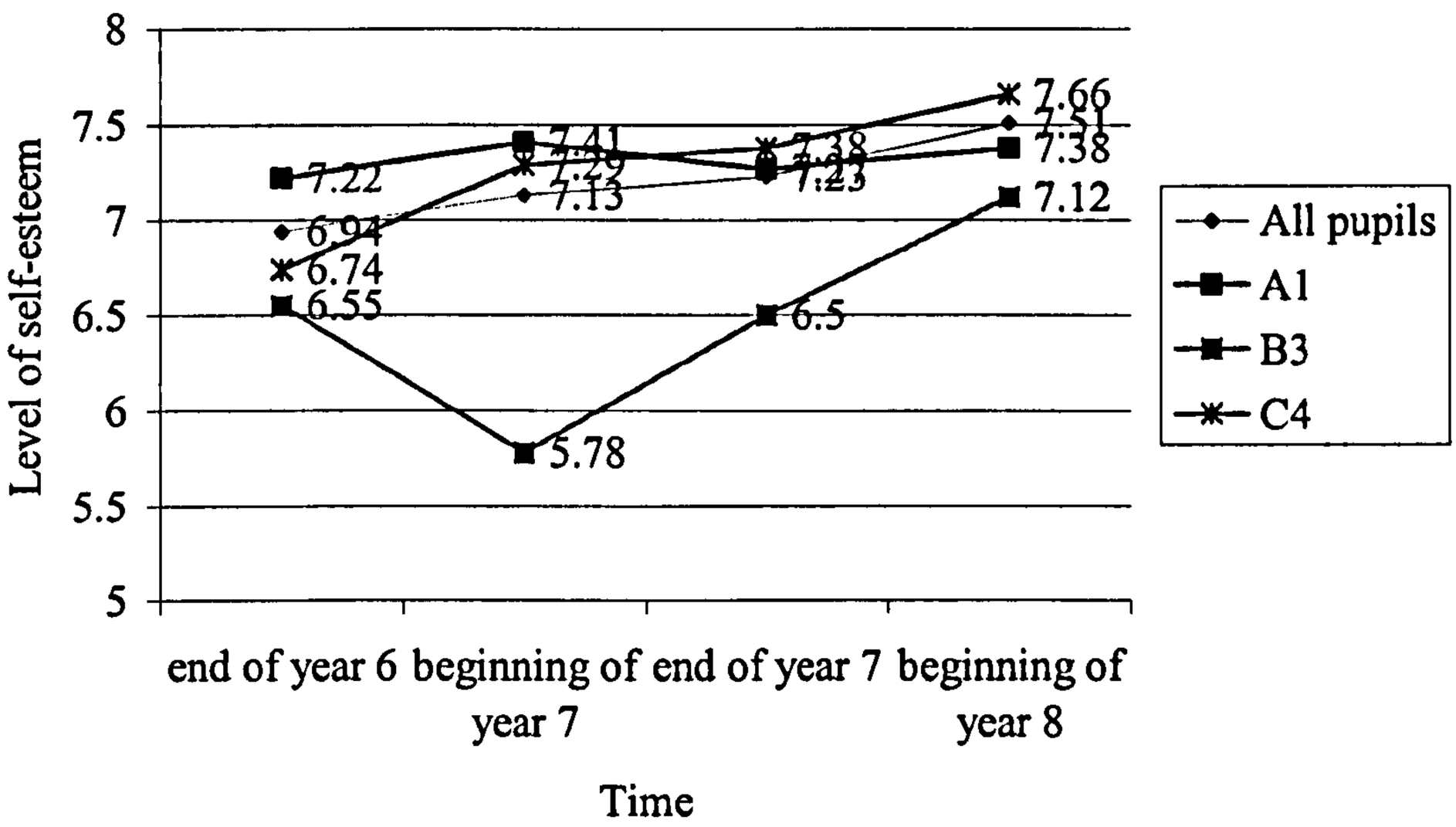

Figure 4.8 Self-esteem between the end of year 6 and the beginning of year 8 in respect of secondary school attended.

Results showed differences in self-esteem amongst pupils from the different secondary schools involved in the study. At the end of year 6, pupils attending school A1 had the highest mean self-esteem (7.22) compared with school B3 whose pupils showed the lowest self-esteem (6.55) but these differences were not significant. At the beginning of year 7, pupils attending schools A1, A2 and C4 showed increases in self-esteem (A1 7.22 to 7.41, A2 7.14 to 8.22, C4 6.74 to 7.29), contrasting with pupils attending school B3 who showed declines in self-esteem (6.55 to 5.78). At the end of year 7, pupils attending schools B3 and C4 showed increases in self-esteem

(B3 5.78 to 6.50, C4 7.29 to 7.38), contrasting with pupils attending school A1 who showed declines in self-esteem (7.41 to 7.27). At the beginning of year 8 pupils attending schools A1, B3 and C4 all showed increases in self-esteem (A1 7.27 to 7.38, B3 6.50 to 7.12 and C4 7.38 to 7.66).

However significant differences in self-esteem were only found at the beginning of year 7. This significance was found to be between school B3 and the remaining schools in the study; pupils from school B3 showed significantly lower self-esteem at the beginning of year 7, than other pupils involved in the study.

4.3.4 Longitudinal changes to self-esteem in respect of gender, age of transfer school attended

The means and standard deviations for pupils who completed questionnaires at all four data collection points (N = 82) were calculated. A repeated measures ANOVA was conducted on these self-esteem scores to establish if there was any significant differences in self-esteem in respect of gender, age of transfer, and secondary school attended.

There was a significant increase in self-esteem between the end of year 6 and the beginning of year 8 [$F(3, 74) = 4.33$, $p < .01$, Wilks Lambda = .85, $\eta^2 = .15$], thus over time results showed a significant increase in self-esteem. No further significant interactions were found.

Table 4.4

Means and Standard Deviations of Self-Esteem for Pupils from whom Data was collected at All Four Data Collection Points

		End of year 6			Beginning of year 7			End of year 7			Beginning of year 8			
		N	M	SD	N	M	SD	N	M	SD	N	M	SD	F
All pupils		82	6.71	2.25	82	6.76	2.64	82	7.17	2.22	82	7.48	2.08	4.33**
Gender	Boys	37	6.96	2.24	37	6.89	2.76	37	7.16	2.38	37	7.68	2.08	
														.87
	Girls	45	6.50	2.27	45	6.66	2.56	45	7.18	2.10	45	7.32	2.09	
Age of Transfer	11	58	6.82	2.26	58	7.19	2.31	58	7.23	2.25	58	7.47	2.14	
	12	24	6.44	2.28	24	5.73	3.12	24	7.02	2.16	24	7.52	1.98	
School transferred to														
	A1	45	6.97	2.19	45	7.24	2.38	45	7.09	2.19	45	7.44	1.96	
	B3	13	6.31	2.50	13	7.00	2.16	13	7.73	2.47	13	7.54	2.76	.76
	C4	24	6.44	2.28	24	5.73	3.11	24	7.02	2.16	24	7.52	1.98	

**significant $p<0.01$
*significant $p<0.05$

4.3.5 Summary

Results in respect of changes to self-esteem showed significant increases in self-esteem between the end of year 6 and the beginning of year 8. Boys showed significantly higher self-esteem than girls throughout the study. Further, pupils who changed school at the end of year 6 showed higher self-esteem than pupils who changed school at the end of year 7 but only significantly at the beginning of year 7. Significant differences where found in respect of the secondary school attended, with pupils who transferred to school B3 showing significantly lower self-esteem at the beginning of year 7 than pupils attending the other schools within the study.

Results collected from pupils at all four data collection points showed a significant increase in self-esteem between the end of year 6 and the beginning of year 8.

4.4 Self-motivation

Means and standard deviations for all pupils in respect self-motivation were calculated at the end of year 6, beginning of year 7, the end of year 7 and the beginning of year 8. Further analysis in respect of gender and age of transfer was also conducted. Results can be found in table 4.5 and figures 4.9, 4.10 and 4.11.

Table 4.5

Means and Standard Deviations of Self-Motivation Between the end of Year 6 and the Beginning of Year 8 Including Differences Between Boys and Girls, Pupils who Changed School at the End of Year 6 Compared with Pupils who Changed School at the End of Year 7, And the Secondary School to which Pupils Transferred, Showing any Significant Differences

		End of year 6				Beginning of year 7				End of year 7				Beginning of year 8			
		N	M	SD	F	N	M	SD	F	N	M	SD	F	N	M	SD	F
All pupils		196	72.22	10.84		264	72.81	11.31		276	74.54	11.58		268	76.87	11.08	
Gender	Boys	99	71.03	11.64		143	73.08	11.28		161	75.93	12.19		149	78.13	10.70	
					.81				.18				5.67*				4.35*
	Girls	97	71.42	10.01		121	72.50	11.38		115	72.59	10.41		119	75.30	11.39	
Age of	11	159	71.72	11.07		220	74.01	10.70		237	75.17	11.40		230	77.44	10.94	
Transfer					1.71				15.56**				5.02*				4.28*
	12	37	69.10	9.65		44	66.84	12.44		39	70.72	12.12		38	73.45	11.44	
Secondary school attended	A1	76	70.75	11.89		77	74.61	11.78		59	72.76	12.17		64	75.30	10.78	
	A2	19	74.58	6.81													
					1.30				7.94**				4.27*				3.85*
	B3	37	69.11	9.65		44	66.84	12.44		39	70.12	12.12		38	73.45	11.44	
	C4	64	72.02	11.05		143	73.69	10.10		178	75.97	11.05		166	78.27	10.92	

**significant $p<0.01$
*significant $p<0.05$

Table 4.5 and figure 4.9 show changes to self-motivation between the end of year 6 and the beginning of year 8. Results showed an overall increase in self-motivation between the end of year 6 (72.22) and the beginning of year 8 (76.87) for all pupils involved in the study, although this was not significant.

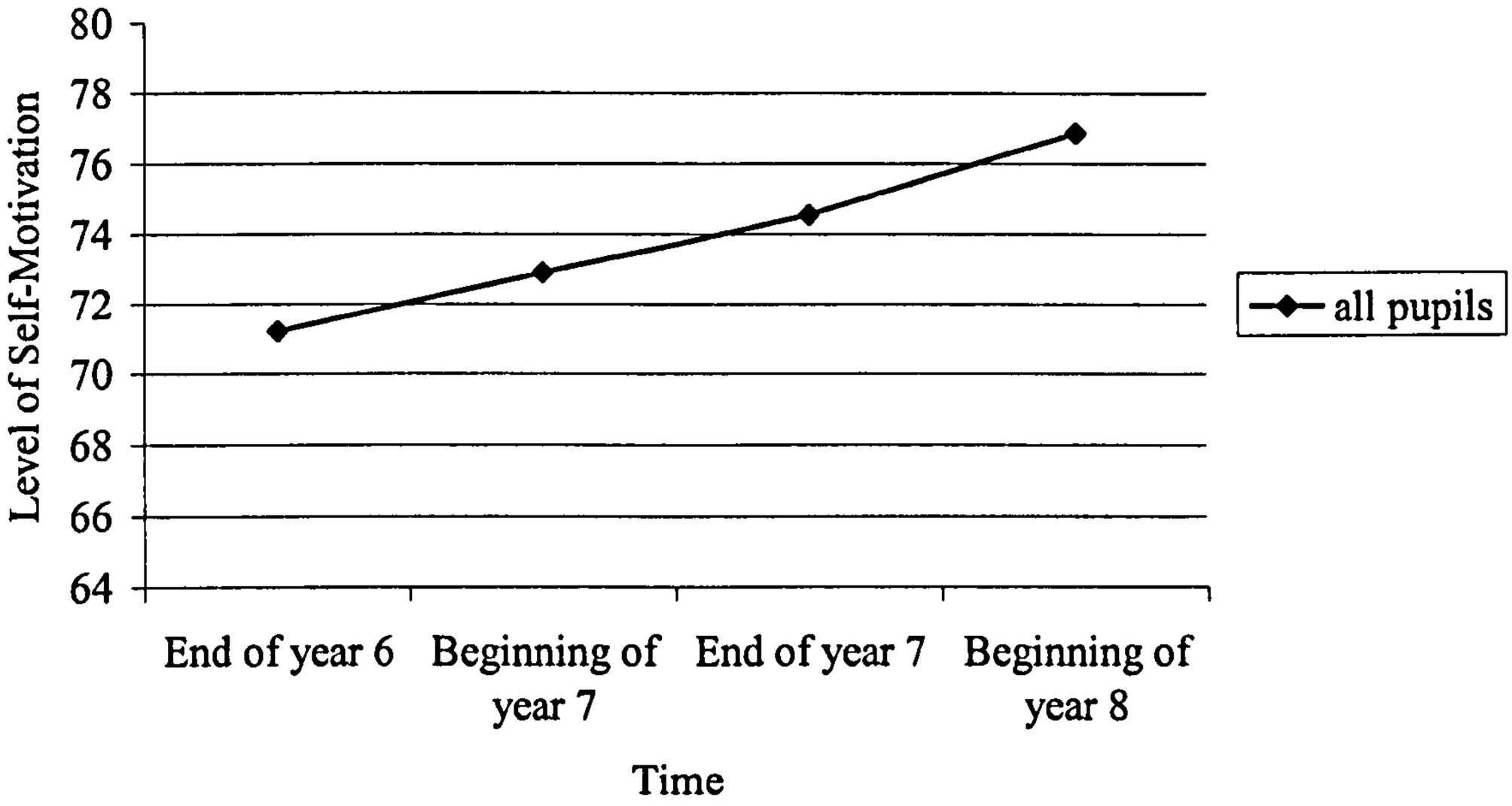

Figure 4.9 Self-motivation between the end of year 6 and the beginning of year 8.

4.4.1 Self-motivation in boys and girls

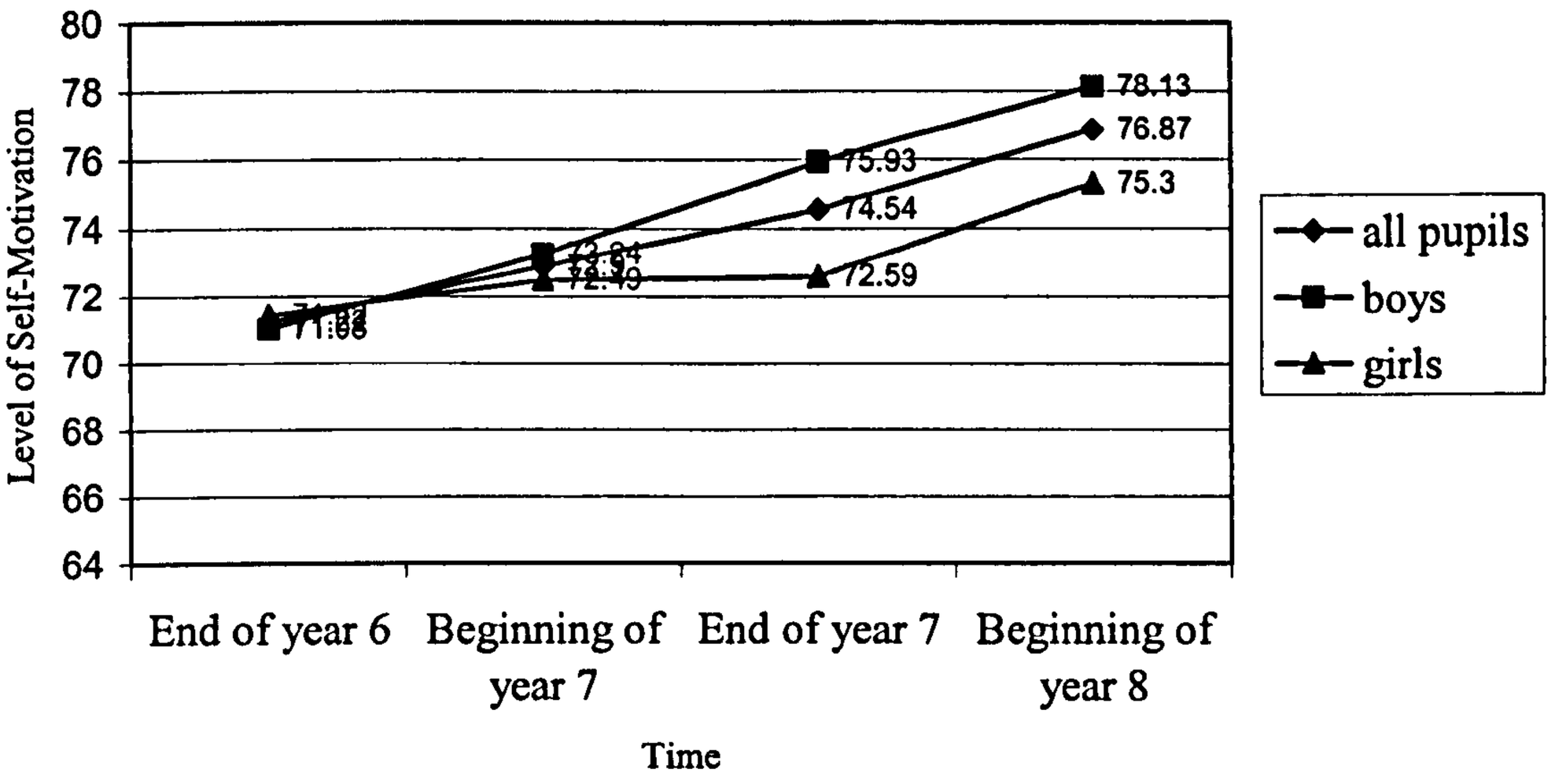

Figure 4.10 Self-motivation between the end of year 6 and the beginning of year 8 for boys and girls.

Table 4.5 and figure 4.10 show self-motivation in respect of gender. Self-motivation increased in boys and girls between the end of year 6 and the beginning of year 8. Consequently self-motivation was higher at the beginning of year 8 than at the end of year 6. At the end of year 6, girls (71.42) reported higher self-motivation than boys (71.03), however the difference was not significant. At the beginning of year 7 boys (73.08) reported higher self-motivation than girls (72.50), although this difference was not significant. At the end of year 7 boys (75.93) continued to show higher self-motivation than girls (72.59). This difference was significant [F (1, 276) = 5.67; p <.05]. At the beginning of year 8 boys (78.13) showed significantly higher self-motivation than girls (75.30) [F (1, 268) = 4.35; p<.05].

4.4.2 Self-motivation in pupils who changed school at age 11 and those pupils who changed school at age 12

Table 4.5 and figure 4.11 show self-motivation in respect of the age at which pupils changed school.

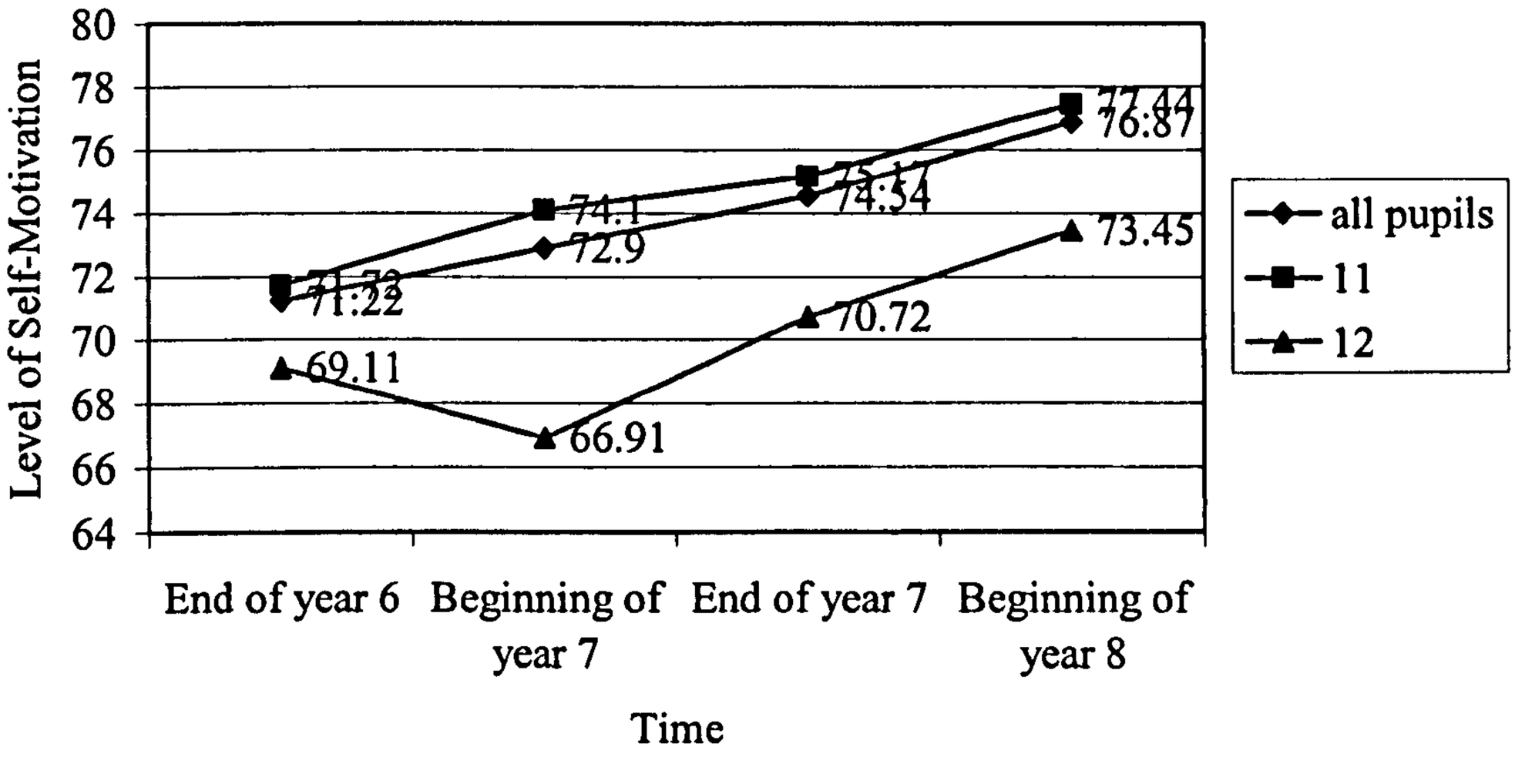

Figure 4.11 Self-motivation between the end of year 6 and the beginning of year 8 in pupils who changed school at the end of year 6 compared with pupils who changed school at the end of year 7.

At the end of year 6 pupils who changed school at age 11 showed higher self-motivation (71.72) than those pupils who changed school at age 12 (69.10), although these result were not significant. At the beginning of year 7, pupils who changed

school at age 11 showed increases to their self-motivation (71.72 - 74.01), whilst there was a decline for pupils who had not changed school (69.10 - 66.84).

At the beginning of year 7 the differences between pupils who had changed school and pupils who had not changed school were significant [F (1, 263) = 15.56; $p<.01$]. During year 7 there was an increase in self-motivation, for both groups, although at the end of year 7 pupils who had changed school showed significantly higher self-motivation (75.17) than pupils who had remained in the same school (70.72) [F (1, 275) = 5.02; $p<.05$]. There were further increases in self-motivation between the end of year 7 and the beginning of year 8, although pupils who had changed school at the end of year 6 showed significantly higher self-motivation (77.44) at the beginning of year 8 than pupils who changed school at the end of year 7 (73.45) [F (1, 266) = 4.28; $p<.05$].

4.4.3 Self-motivation in pupils who transferred to the secondary schools involved in the study

Table 4.5 and figure 4.11 show changes to self-motivation in respect of the secondary school pupils attended.

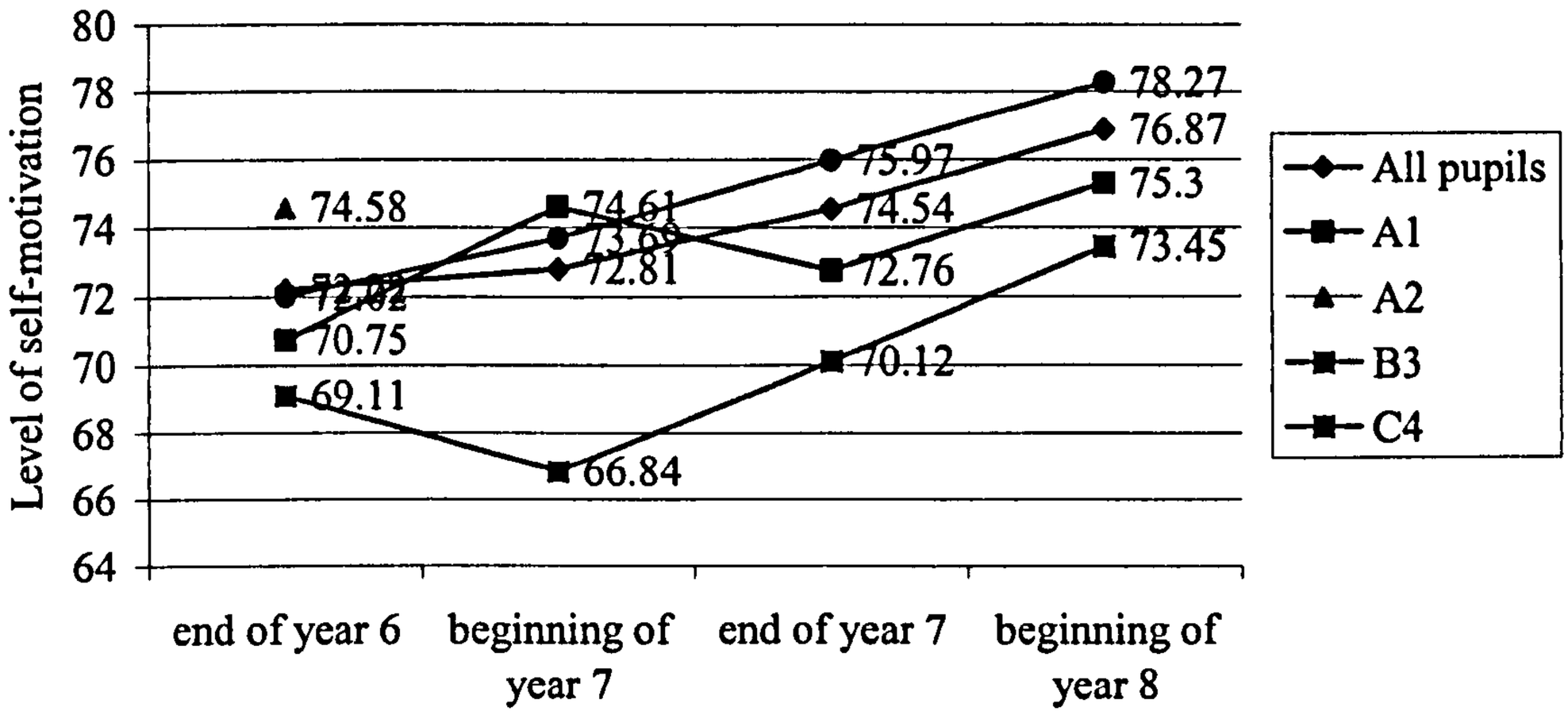

Figure 4.12 Self-motivation between the end of year 6 and the beginning of year 8 in respect of secondary school attended.

Between the end of year 6 and the beginning of year 7, self-motivation was found to increase in schools A1 (70.75 to 74.61) and C4 (72.02 to 73.69). This was in contrast to pupils in school B3 where there was a decrease in self-motivation (69.11 to 66.84). Between the beginning of year 7 and the end of year 7, further differences between schools were evident, with increases in self-motivation in pupils attending schools B3 (66.84 to 70.12) and C4 (73.69 to 75.97), contrasting with pupils attending school A1 who showed a decrease in their self-motivation (74.61 to 72.76). Between the end of year 7 and the beginning of year 8 all pupils showed an increase in self-motivation.

There were differences in self-motivation between pupils who attended the secondary schools involved in the study. These differences were found to be significant at the beginning of year 7 [$F(2, 263) = 7.94, p<.01$], the end of year 7 [$F(2, 275) = 4.27, p<.05$), and the beginning of year 8 [$F(2, 267) = 3.85, p<.05$). Further analysis showed that these significant differences occurred between pupils attending school B3 and pupils attending schools A1 and C4 at the beginning of year 7, indicating that pupils who would be transferring to school B3 showed significantly lower self-motivation than pupils attending schools A1 and C4. At the end of year 7 and the beginning of year 8, significant differences in motivation were shown between pupils attending schools B3 and C4, showing that pupils attending school B3 had significantly lower self-motivation than pupils who attended school C4.

4.4.4 Longitudinal changes to self-motivation respect of gender, age of transfer and secondary school attended

Means and standard deviations for pupils who completed questionnaires at all four data collection points (N = 63) were calculated. Results are shown in table 4.6. A repeated measures ANOVA was conducted on self-motivation scores to identify if there was any significant difference in respect of time, gender, age of transfer, and secondary school attended. Results showed a significant increase in self-motivation between the end of year 6 and the beginning of year 8 [$F(3, 55) = 3.94, p < .01$; Wilks Lambda = .82; $\eta^2 = .18$]. No further significant interactions were found.

4.4.5 Summary

Self-motivation increased between the end of year 6 and the beginning of year 8. Boys showed higher self-motivation than girls at the end of year 7 and the

beginning of year 8. Further, pupils who changed school at the end of year 6 showed higher self-motivation than pupils who changed school at the end of year 7, at the beginning and end of year 7 and at the beginning of year 8. Significant differences in self-motivation were found to occur between pupils attending the different secondary schools involved in the study at the beginning and end of year 7.

Analysis of results of pupils who completed questionnaires at all four data collection points showed a significant increase in self-motivation between the end of year 6 and the beginning of year 8.

Table 4.6

Means and Standard Deviations of Self-Motivation for Pupils from whom Data was collected at All Four Data Collection Points

		End of year 6			Beginning of year 7			End of year 7			Beginning of year 8			
		N	M	SD	N	M	SD	N	M	SD	N	M	SD	F
All pupils		63	68.65	11.96	63	72.03	12.19	63	72.27	12.96	63	75.19	11.64	3.94**
Gender	Boys	27	67.78	13.70	27	69.85	11.96	27	70.48	15.23	27	75.81	12.15	
														.73
	Girls	36	69.31	10.61	36	73.67	12.27	36	73.61	10.99	36	74.72	11.39	
Age of Transfer	11	41	68.32	13.12	41	73.34	12.10	41	71.85	12.98	41	75.15	12.69	
														.00
	12	22	69.27	9.67	22	69.59	12.26	22	73.05	13.17	22	75.27	9.65	
Secondary school attended	A1	32	68.38	13.05	32	72.78	12.99	32	70.97	12.31	32	75.06	11.55	
	B3	22	68.11	14.19	22	75.33	8.49	22	75.00	15.52	22	75.44	16.96	1.01
	C4	9	69.27	9.67	9	69.59	12.26	9	73.05	13.17	9	75.27	9.65	

**significant $p<0.01$
*significant $p<0.05$

4.5 Relationships between attainment, self-esteem and self-motivation

4.5.1 Attainment and self-esteem

Significant positive relationships were found between attainment and self-esteem at all four data collection points. These are shown in table 4.7. Results therefore show that those pupils with higher attainment also had more positive self-esteem.

Table 4.7

Relationships between Attainment and Self-esteem

	SE1	SE2	SE3	SE4
ATT1	.21*			
ATT2		.28**		
ATT3			.31**	
ATT4				.40**

SE = self-esteem

ATT = attainment

** significant $p<0.01$

* significant $p<0.05$

1 = end of year 6

2 = beginning of year 7

3 = end of year 7

4 = beginning of year 8

4.5.1.1 Attainment and self-esteem in respect of gender

As table 4.8 shows there was a significant positive relationship between attainment and self-esteem amongst boys at the beginning of year 7, the end of year 7 and the beginning of year 8. Thus higher attainment is reflected in more positive self-esteem. For girls, there was a significant positive relationship in respect of attainment and self-esteem at the beginning of year 8.

Table 4.8

Relationships Between Attainment and Self-esteem for Boys and Girls

		SE1	SE2	SE3	SE4
Boys	ATT1				
	ATT2		.30**		
	ATT3			.31**	
	ATT4				.39**
Girls	ATT1				
	ATT2				
	ATT3				
	ATT4				.41**

SE = self-esteem

ATT = attainment

** significant $p<0.01$

* significant $p<0.05$

1 = end of year 6

2 = beginning of year 7

3 = end of year 7

4 = beginning of year 8

4.5.1.2 Attainment and self-esteem in respect of age of transfer

As table 4.9 shows, there was a significant positive relationships between attainment and self-esteem in pupils who changed school at age 11 at the beginning of year 7, the end of year 7 and the beginning of year 8, i.e. post transfer to secondary school. For those pupils who changed school at the end of year 7 (age 12), there were significant positive relationships at the beginning of year 7 and the beginning of year 8, i.e. at the beginning of the academic year, before a change of school and after a change of school.

Table 4.9

Relationships Between Attainment and Self-Esteem for Pupils who Changed School at the End of Year 6 and those who Changed School at the End of Year 7

		SE1	SE2	SE3	SE4
Change at the end of year 6	ATT1				
	ATT2		.36**		
	ATT3			.32**	
	ATT4				.43**
Change at the end of year 7	ATT1				
	ATT2	.51**			
	ATT3				
	ATT4				.37**

SE = self-esteem
ATT = attainment
** significant $p<0.01$
* significant $p<0.05$
1 = end of year 6
2 = beginning of year 7
3 = end of year 7
4 = beginning of year 8

4.5.1.3 Attainment and self-esteem in respect of secondary school attended

Table 4.10 shows significant positive relationships between attainment and self-esteem in pupils in schools A1, B3 and C4. However, in school A1 there were significant relationships at the end of year 7 and the beginning of year 8; in school B3, at the beginning of year 7 and the beginning of year 8; and in school C4, at the beginning of year 7 and the end of year 7.

Table 4.10

Relationships Between Attainment and Self-Esteem for pupils who Attended Schools A1, B3 And C4

		SE1	SE2	SE3	SE4
School A1	ATT1				
	ATT2				
	ATT3			.34**	
	ATT4				.46**
School B3	ATT1				
	ATT2		.51**		
	ATT3				
	ATT4				.37*
School C4	ATT1				
	ATT2	.40**			
	ATT3			.34**	
	ATT4				

SE = self-esteem

ATT = attainment

** significant $p<0.01$

* significant $p<0.05$

1 = end of year 6

2 = beginning of year 7

3 = end of year 7

4 = beginning of year 8

4.5.1.4 Summary

Significant positive relationships were found at some points in the study between attainment and self-esteem, for all pupils, both in respect of gender, age of transfer and secondary school attended. However relationships were not consistent throughout the study period.

4.5.2 Attainment and self-motivation

As table 4.11 shows, there were significant positive relationships between attainment and self-motivation at the end of year 7 and the beginning of year 8. Thus pupils who have higher attainment in physical education at the end of year 7 and the beginning of year 8 also have higher self-motivation towards the subject.

Table 4.11

Relationships Between Attainment and Self-motivation

	SM1	SM2	SM3	SM4
ATT1				
ATT2				
ATT3			.30**	
ATT4				.20*

SM = self-motivation
1 = end of year 6
ATT = attainment
2 = beginning of year 7
** significant $p<0.01$
3 = end of year 7
* significant $p<0.05$
4 = beginning of year 8

4.5.2.1 Attainment and self-motivation in respect of gender

There were significant positive relationships between attainment and self-motivation for boys at the end of year 7, and for girls at the end of year 6 and the beginning of year 8. Results are shown in tables 4.12.

Table 4.12

Relationships between Attainment and Self-motivation for Boys and Girls

		SM1	SM2	SM3	SM4
Boys	ATT1				
	ATT2				
	ATT3			.39**	
	ATT4				
Girls	ATT1	.32*			
	ATT2				
	ATT3				
	ATT4				.36**

SM = self-motivation
1 = end of year 6
ATT = attainment
2 = beginning of year 7
** significant $p<0.01$
3 = end of year 7
* significant $p<0.05$
4 = beginning of year 8

4.5.2.2 Attainment and self-motivation in respect of age of transfer

There were significant positive relationships between attainment and self-motivation at the end of year 7 for those pupils who changed school at the end of year 6 only. On the other hand there were significant positive relationships between attainment and self-motivation at the end of year 6 and the beginning of year 7 in

those pupils who changed school at the end of year 7. Results are shown in table 4.13.

Table 4.13

Relationships Between Attainment and Self-Motivation for Pupils who Changed School at the End of Year 6 and those who Changed School at the End Of Year 7

		SM1	SM2	SM3	SM4
Changed at the end of year 6	ATT1				
	ATT2				
	ATT3			.34**	
	ATT4				
Changed at the end of year 7	ATT1	.37*			
	ATT2		.42*		
	ATT3				
	ATT4				

SM = self-motivation

ATT = attainment

** significant $p<0.01$

* significant $p<0.05$

1 = end of year 6

2 = beginning of year 7

3 = end of year 7

4 = beginning of year 8

4.5.2.3 Attainment and self-motivation in respect of secondary school attended

Table 4.14 shows that there were significant positive relationships for pupils transferring to school B3 at the end of year 6 and the beginning of year 7, and in school C4 at the end of year 7. No significant relationships between attainment and self-motivation were shown for pupils attending school A1.

Table 4.14

Relationships Between Attainment and Self-Motivation for Pupils who Attended Schools A1, B3 And C4

		SM1	SM2	SM3	SM4
School A1	ATT1				
	ATT2				
	ATT3				
	ATT4				
School B3	ATT1	.37*			
	ATT2		.42*		
	ATT3				
	ATT4				
School C4	ATT1				
	ATT2				
	ATT3			.31**	
	ATT4				

SM= self-motivation

ATT = attainment

** significant $p<0.01$

* significant $p<0.05$

1 = end of year 6

2 = beginning of year 7

3 = end of year 7

4 = beginning of year 8

4.5.2.4 Summary

There were significant relationships between attainment and self-motivation. Such relationships were evident for all pupils, between boys and girls, in respect of age of transfer and secondary school attended.

4.5.3 Self-esteem and self-motivation

As table 4.15 shows, there was a significant positive relationship between self-esteem and self-motivation at the end of year 6, the beginning of year 7, the end of year 7 and the beginning of year 8. Thus, high self-esteem is associated with high self-motivation.

Table 4.15

Relationships Between Self-esteem and Self-motivation

	SM1	SM2	SM3	SM4
SE1	.38**			
SE2		.43**		
SE3			.50**	
SE4				.38**

SM = Self-motivation
SE = Self-esteem
** significant $p<0.01$
* significant $p<0.05$
1 = end of year 6
2 = beginning of year 7
3 = end of year 7
4 = beginning of year 8

4.5.3.1 Self-esteem and self-motivation in respect of gender

There were significant positive relationships between self-esteem and self-motivation in boys at the beginning of year 7, the end of year 7 and the beginning of year 8. For girls there were significant positive relationships at the end of year 6, the beginning of year 7, the end of year 7 and the beginning of year 8. Results are shown in table 4.16.

Table 4.16

Relationships Between Self-esteem and Self-motivation for Boys and Girls

		SM1	SM2	SM3	SM4
Boys	SE1				
	SE2		.25**		
	SE3			.44**	
	SE4				.24*
Girls	SE1	.59**			
	SE2		.62**		
	SE3			.58**	
	SE4				.47**

SM = Self-motivation
SE = Self-esteem
** significant $p<0.01$
* significant $p<0.05$
1 = end of year 6
2 = beginning of year 7
3 = end of year 7
4 = beginning of year 8

4.5.3.2 Self-esteem and self-motivation in respect of age of transfer

There were significant positive relationships for pupils who changed school at the end of year 6 at the end of year 6, the beginning of year 7, the end of year 7 and at the beginning of year 8. For those pupils who changed school at the end of

year 7, there were significant positive relationships between self-esteem and self-motivation at the beginning of year 7, the end of year 7 and the beginning of year 8. Results are shown in table 4.17.

Table 4.17

Relationships Between Self-Esteem and Self-Motivation for Pupils who Changed School at the End of Year 6 and those who Changed School at the End of Year 7

		SM1	SM2	SM3	SM4
Changed at the end of year 6	SE1	.41**			
	SE2		.39**		
	SE3			.50**	
	SE4				.35**
Changed at the end of year 7	SE1				
	SE2		.46**		
	SE3			.43**	
	SE4				.52**

SM = Self-motivation

SE = Self-esteem

** significant $p<0.01$

* significant $p<0.05$

1 = end of year 6

2 = beginning of year 7

3 = end of year 7

4 = beginning of year 8

4.5.3.3 Self-esteem and self-motivation in respect of secondary school attended

Results, as shown in table 4.18, showed significant positive relationships between self-esteem and self-motivation in schools A1 and C4 at the end of year 6, the beginning of year 7, the end of year 7 and the beginning of year 8 and in school B3 at the beginning of year 7, the end of year 7 and the beginning of year 8.

Table 4.18

Relationships Between Self-Esteem and Self-Motivation in Respect of the Secondary School Attended

		SM1	SM2	SM3	SM4
School A1	SE1	.33**			
	SE2		.47**		
	SE3			.45**	
	SE4				.31**
School B3	SE1				
	SE2		.47**		
	SE3			.43**	
	SE4				.52**
School C4	SE1	.69*			
	SE2		.35*		
	SE3			.52**	
	SE4				.37*

SM = Self-motivation

SE = Self-esteem

** significant $p<0.01$

* significant $p<0.05$

1 = end of year 6

2 = beginning of year 7

3 = end of year 7

4 = beginning of year 8

4.5.3.4 Summary of relationships between self-esteem and self-motivation

Results showed significant relationships between self-esteem and self-motivation in all pupils, between boys and girls, in respect of age of transfer and secondary school attended, although there was some variation in the level of significance. Further there was no significant difference at the end of year 6 between self-esteem and self-motivation for boys, for pupils who changed school at the end of year 7 and for pupils who attended secondary school B3.

4.5.3.5 Standard Multiple Regression Analysis

Standard multiple regression analysis were conducted to establish the interrelationships between attainment, self-esteem and self-motivation. Analysis was undertaken at each of the four data collection points. Results are shown in tables 4.19 – 4.22. In looking at the results of multiple regression analysis, there is a need to look at the R^2 values obtained, as this shows the amount of variance within the dependent variable that can be explained as a result of the independent variables. There is also a need to look at the beta score which identifies which independent variable is making the biggest contribution to the dependent variable.

Table 4.19

Summary of Standard Multiple Regression Analysis for Variables Reflecting Self-esteem, self-motivation and attainment at the end of year 6 (N = 105)

Dependent variable	Independent variable	Standardized Beta
Self-esteem	Self-motivation	.45
	Attainment	.20
$R = .52$, $R^2 = .25$		
Self-motivation	Self-esteem	.48
	Attainment	-.00
$R = .48$, $R^2 = .23$		
Attainment	Self-esteem	.25
	Self-motivation	-.00
$R = .25$, $R^2 = .04$		

Table 4.19 shows that at the end of year 6, 25% of the variance in self-esteem could be attributed to self-motivation and attainment. Further, self-motivation was the independent variable that made the biggest contribution to this variance ($\beta = .45$). Results also showed that 23% of the variance in self-motivation could be attributed to self-esteem and attainment, of which self-esteem was the biggest contributor. However, only 4% of variance in attainment could be attributed to self-esteem and self-motivation.

Table 4.20

Summary of Standard Multiple Regression Analysis for Variables Reflecting Self-esteem, self-motivation and attainment at the beginning of year 7 (N = 88)

Dependent variable	Independent variable	Standardized Beta
Self-esteem	Self-motivation	.51
	Attainment	.16
$R = .56$, $R^2 = .29$		
Self-motivation	Self-esteem	.52
	Attainment	.03
$R = .53$, $R^2 = .28$		
Attainment	Self-esteem	.22
	Self-motivation	.04
$R = .24$, $R^2 = .04$		

At the beginning of year 7, 29% of the variance in self-esteem could be attributed to self-motivation and attainment. Self-motivation was the strongest contributor ($\beta = .51$). To a lesser extent, 28% of the variance in self-motivation could be attributed to self-esteem and attainment, with self-esteem being the biggest contributory. However, only 4% of the variance in attainment could be attributed to self-esteem or self-motivation.

Table 4.21

Summary of Standard Multiple Regression Analysis for Variables Reflecting Self-esteem, self-motivation and attainment at the end of year 7 (N = 193)

Dependent variable	Independent variable	Standardized Beta
Self-esteem	Self-motivation	.48
	Attainment	.09
$R = .51$, $R^2 = .27$		
Self-motivation	Self-esteem	.46
	Attainment	.20
$R = .54$, $R^2 = .27$		
Attainment	Self-esteem	.11
	Self-motivation	.27
$R = .33$, $R^2 = .10$		

At the end of year 7, 27% of the variance in self-esteem could be attributed to self-motivation and attainment, with self-motivation being the biggest contributor ($\beta = .48$). However 27% of the variance in self-motivation could be attributed to self-esteem and attainment, with self-esteem being the biggest contributor. Only 10% of the variance in attainment could be attributed to self-esteem and self-motivation.

Table 4.22

Summary of Standard Multiple Regression Analysis for Variables Reflecting Self-esteem, self-motivation and attainment at the beginning of year 8 (N = 101)

Dependent variable	Independent variable	Standardized Beta
Self-esteem	Self-motivation	.45
$R = .54$, $R^2 = .28$	Attainment	.24
Self-motivation	Self-esteem	.48
$R = .49$, $R^2 = .23$	Attainment	.04
Attainment	Self-esteem	.30
$R = .32$, $R^2 = .09$	Self-motivation	.04

At the beginning of year 8, 28% of the variance in self-esteem could be attributed to self-motivation and attainment, with self-motivation being the biggest contributor ($\beta = .45$). Only 23% of the variance in self-motivation could be attributed to self-esteem and attainment, with self-esteem being the biggest contributor. However, only 9% of the variance in attainment could be attributed to self-esteem and self-motivation.

4.5.3.6 Standard Multiple Regressions Summary

In the case of the results of the analysis conducted on self-esteem, self-motivation and attainment, results showed that throughout the study, self-esteem was the dependent variable that obtained the highest R^2 value, i.e. the amount of variance in self-esteem that can be explained by self-motivation and attainment. Thus the results indicate that variance in self-esteem can be predicted by self-motivation and attainment.

Results showed that at the end of year 6 25% of variance in self-esteem could be predicted by self-motivation and attainment, at the beginning of year 7 this was

29%, at the end of year 7 this was 27% and at the beginning of year 8 variance was 28%.

The results also identified which variable acted as the greater predictor, as reflected in the standardized Beta values recorded. Throughout the study, self-motivation acted as a greater predictor of self-esteem than attainment.
Further, self-motivation and attainment contributed to over half the variance evident in self-esteem at each of the four data collection points.

4.6 Attitudes

4.6.1 Attitudes towards physical education between the end of year 6 and the beginning of year 8.

The questionnaire looking at changing attitudes towards physical education focused on 6 questions;

1. Do you enjoy physical education?
2. Do you look forward to physical education?
3. Do you participate in extra-curricular activities?
4. Do you participate in sporting activities outside of school?
5. Do you think you are good at physical education?
6. Would you choose to participate in physical education?

Table 4.23

The Number and Percent of Pupils who enjoy Physical Education Between the End of Year 6 and the Beginning of Year 8 showing Differences Between Boys and Girls

	All Pupils			Boys			Girls			Pupils who completed questionnaires at all four collection points			Boys			Girls		
	N	N1	%	N	N1	%	N	N1	%	N	N1	%	N	N1	%	N	N1	%
End of Year 6	45	43	95.6	19	19	100	26	24	92	43	41	95	19	19	100	24	22	92
Beginning of Year 7	196	192	97.9	118	117	99.2	78	75	96.2	43	40	93	19	19	100	24	21	88
End of Year 7	227	217	95.6	138	133	96.4	89	84	94.4	43	39	91	19	17	88	24	22	92
Beginning of Year 8	213	204	95.8	122	120	98.4	91	84	92.3	43	41	96	19	19	100	24	22	92

Question 1. Do you enjoy physical education?

Table 4.23 shows the number and percent of pupils who enjoyed physical education at the end of year 6, the beginning and end of year 7 and the beginning of year 8.

Results showed that during the study period there was little variation in the percent of all pupils in the study who enjoyed physical education, the percent of positive responses being above 95% at each of the four questionnaire administrations. Throughout the study, a higher percent of boys identified that they enjoyed physical education than girls, although all responses were above 92%.

Data collected from pupils who completed all four questionnaires showed similar results with little variation in the percent of pupils who enjoyed physical education, with the percent being above 91% at each of the four questionnaire administrations. Further a higher percent of boys identified they enjoyed physical education than girls, except for at the end of year 7 when this was reversed.

Table 4.24

The Number And Percent Of Pupils Who Looked Forward To Physical Education between The End Of Year 6 And The Beginning Of Year 8 showing Differences between Boys and Girls

	All Pupils			Boys			Girls			Pupils who completed questionnaires at all four collection points			Boys			Girls		
	N	N1	%	N	N1	%	N	N1	%	N	N1	%	N	N1	%	N	N1	%
End of Year 6	45	43	95.6	19	18	95	24	22	92	43	40	93	19	18	95	24	22	92
Beginning of Year 7	196	189	96.4	118	116	98.3	78	73	93.6	43	37	86	19	19	100	24	19	79
End of Year 7	227	209	92.1	138	131	94.9	89	78	87.6	43	34	79.1	19	15	79	24	19	79
Beginning of Year 8	213	191	89.7	122	120	98.4	91	73	80.2	43	36	83.7	19	19	100	24	17	71

Question 2. Do you look forward to physical education?

Results of responses for question 2 are shown in table 4.24.

There was a small decrease in the percentage of all pupils who looked forward to physical education between the end of year 6 and the beginning of year 8 decreasing from 95.6% to 89.7%. Boys looked forward to physical education more than girls, with the percent of positive responses from boys remaining above 94% for the duration of the study.

In respect of those pupils who completed all four questionnaires there was a decrease from 93% to 83.7% with a drop to 79.1% at the end of year 7. Responses from boys showed that they looked forward to physical education more than girls throughout the study.

Table 4.25

The Number and Percent of Pupils who Participated in Extra-Curricular Activities Between the End of Year 6 and the Beginning of Year 8 showing Differences between Boys and Girls

	All Pupils			Boys			Girls			Pupils who completed questionnaires at all four collection points			Boys			Girls		
	N	N1	%	N	N1	%	N	N1	%	N	N1	%	N	N1	%	N	N1	%
End of Year 6	45	35	77.8	19	12	63	24	15	62.5	43	27	62.8	19	12	63	24	15	62.5
Beginning of Year 7	196	143	72.9	118	84	71.2	78	59	75.6	43	28	65.1	19	12	63	24	16	66.7
End of Year 7	227	157	69.2	138	102	73.9	89	55	61.8	43	22	51.2	19	8	42	24	14	58.3
Beginning of Year 8	213	112	52.6	122	71	58.2	91	41	45.1	43	23	53.5	19	10	53	24	13	54.2

Question 3. Participation in extra-curricular activities.

The extent to which pupils were involved in extra-curricular activities organised by the school are shown in table 4.25.

Results showed a decline in levels of participation in extra-curricular activities for all pupils between the end of year 6 and the beginning of year 8, from 77.8% to 52.6%. The largest decline occurred between the end of year 7 and the beginning of year 8 (69.2% to 52.6%).

Results of those pupils who completed all four questionnaires showed a decline, although this was not significant. However, there was an increase in levels of participation between the end of year 6 and the beginning of year 7, followed by a decline during year 7, with a slight increase at the beginning of year 8.

Throughout the study boys showed a higher level of involvement in extra-curricular activities than girls.

Table 4.26

The Number and Percent of Pupils who participated in Activities Outside of School Between the End of Year 6 and the Beginning of Year 8 showing Differences between Boys and Girls

	All Pupils			Boys			Girls			Pupils who completed questionnaires at all four collection points			Boys			Girls		
	N	N1	%	N	N1	%	N	N1	%	N	N1	%	N	N1	%	N	N1	%
End of Year 6	45	27	60	19	9	47	24	13	54	43	22	51.2	19	9	47	24	13	54
Beginning of Year 7	196	114	58.2	118	84	71.2	78	30	38.5	43	23	53.5	19	12	63	24	11	46
End of Year 7	227	147	64.8	138	109	79	89	38	42.7	43	23	53.5	19	10	53	24	13	54
Beginning of Year 8	213	131	61.5	122	95	77.9	91	36	39.6	43	28	65.1	19	13	68	24	15	63

Question 4. Participation in activities outside of school

The number and percent of pupils who participated in activities outside of school are shown in table 4.26.

In contrast to the decline in participation in extra-curricular activities within school, there was a small increase in the percentage of all pupils participating in activities outside of school (60% at the end of year 6 to 61.5% at the beginning of year 8). The highest percentage of pupils (64.8%) participating in activities outside of school occurred at the end of year 7. However, at the beginning of year 7 only 58.2% of pupils participated in activities outside school.

Results for those pupils who completed all four questionnaires showed that there was an increase in the percentage of pupils who participated in activities outside of school, although this increase was not significant.

At the end of year 6 girls showed a higher level of involvement in activities outside of school (girls 54%, boys 47%). However this was not replicated for the remainder of the study, where boys showed a higher level of involvement in activities outside of school than girls.

Table 4.27

The Number and Percent of Pupils who think they are Good at Physical Education Between the End of Year 6 and the Beginning of Year 8 differences between Boys and Girls

	All Pupils			Boys			Girls			Pupils who completed questionnaires at all four collection points			Boys			Girls		
	N	N1	%	N	N1	%	N	N1	%	N	N1	%	N	N1	%	N	N1	%
End of Year 6	45	40	88.9	19	18	95	24	19	79.2	43	37	86	19	18	95	24	19	80
Beginning of Year 7	196	180	91.8	118	109	92.4	78	71	91	43	38	88.4	19	18	95	24	20	83
End of Year 7	227	194	85.5	138	129	87.7	89	73	82	43	36	83.7	19	15	79	24	21	88
Beginning of Year 8	213	190	89.2	122	115	94.3	91	75	82.4	43	35	81.4	19	14	74	24	21	88

Question 5. Do you think you are good at physical education?

The extent to which pupils rated themselves as good at physical education is shown in table 4.27.

There was a small variation in the percentage of all pupils who think they are good at physical education between the end of year 6 and the beginning of year 8. For those pupils who completed all four questionnaires a lower percentage (81.4%) of pupils identified themselves as being good at physical education at the beginning of year 8 than at the end of year 6 (86%). However these differences were not significant.

Table 4.28

The Number and Percent of Pupils who would choose to Participate in Physical Education Between the End of Year 6 and the Beginning of Year 8 showing Differences between Boys and Girls

	All Pupils			Boys			Girls			Pupils who completed questionnaires at all four collection points			Boys			Girls		
	N	N1	%	N	N1	%	N	N1	%	N	N1	%	N	N1	%	N	N1	%
End of Year 6	45	40	88.9	19	19	100	24	22	92	43	41	95.3	19	19	100	24	22	92
Beginning of Year 7	196	178	91.2	118	108	91.5	78	71	91	43	37	86	19	17	90	24	20	83
End of Year 7	227	199	87.7	138	129	93.5	89	70	78.7	43	35	81.4	19	15	79	24	20	83
Beginning of Year 8	213	183	85.9	122	118	96.7	91	65	71.4	43	38	88.4	19	18	85	24	20	83

Question 6. Would you choose to participate in physical education?

The extent to which pupils would choose to participate in physical education is shown in table 4.28.

There was a small decrease in the percent of all pupils who would choose to participate in physical education between the end of year 6 and the beginning of year 8. However, there was an increase in percent of pupils between the end of year 6 and the beginning of year 7. By the end of year 7 this had been reversed and continued to decline into year 8.

For those pupils who completed all four questionnaires there was a significant decrease in the percent of pupils who would choose to participate in physical education between the end of year 6 and the beginning of year 8 [$F = 2.93$ $p < .05$]. However there were variations within the study period. Between the end of year 6 (95.3%) and the beginning of year 7 (86%) there was a significant decrease in the number of pupils who would choose to participate in physical education. There was a further decrease between the beginning of year 7 (86%) and the end of year 7 (81.4%) although this difference was not found to be significant. However between the end of year 7 (81.4%) and the beginning of year 8 (88.4%), there was a significant increase in the number of pupils who would choose to participate in physical education.

4.6.2 Attitudes to changing school

Prior to transfer from primary school (end of year 6) or combined school (end of year 7) to secondary school pupils were asked to identify what they were and were not looking forward to on transfer to the secondary school specifically in respect of physical education. Pupils were able to give more than one response to the questions. For those pupils who changed school at the age 11 these questionnaires were completed at the end of year 6, whilst for those pupils who changed school at age 12 questionnaires were completed that at the end of year 7. Ten categories of responses were identified for what pupils were looking forward to on transfer, with 12 categories identified for what pupils were not looking forward to. Pupils could provide responses within one or more of the categories. The results are shown in table 4.29 and 4.30.

Table 4.29

What Pupils were Looking Forward to in Physical Education when they Change School

CATEGORY	ALL		GENDER				AGE OF TRANSFER			
			BOYS		GIRLS		11		12	
	N	%	N	%	N	%	N	%	N	%
Increased range of activities: learning more sports; more activities to do; specific activities.	95	66.4%	46	67.6%	49	65.3%	61	61%	34	79%
Equipment: more apparatus	9	6.2%	1	1.6%	8	10.6%	8	8%	1	2.3%
More challenging	8	5.5%	4	5.8%	4	5.3%	8	8%	0	0%
Social aspects: meeting new friends	7	4.8%	3	4.4%	4	5.3%	6	6%	1	2.3%
Everything	7	4.8%	6	8.8%	1	1.3%	7	7%	0	0%
Academic subjects: e.g. sciences, mathematics, English	6	4.1%	5	7.3%	1	1.3%	2	2%	4	9.3%
Increased extra-curricular provision: taking part in extra-curricular activities.	5	3.4%	1	1.6%	4	5.3%	2	2%	3	6.9%
Increased time for physical education: I can do more physical education; longer physical education sessions	3	2%	2	2.9%	1	1.3%	3	3%	0	0%
Changing / showers	3	2%	0	0%	3	4%	3	3%	0	0%

Table 4.30

What Pupils were Not Looking Forward to in Physical Education when they Change School

CATEGORY	ALL		GENDER				AGE OF TRANSFER			
			BOYS		GIRLS		11		12	
	N	%	N	%	N	%	N	%	N	%
Specific activities: e.g. gymnastics, dance	42	33%	20	30.8%	22	34.9%	25	29%	17	50%
Staff: having to work harder	23	18.1%	14	21.5%	9	14.2%	19	22%	4	11.7%
Nothing: identified that there was nothing that they were not looking forward to	19	14.9%	5	7.7%	14	22%	14	16.2%	5	14.7%
Changing / showers: showering with other people	15	11.8%	7	10.8%	8	12.6%	15	17.4%	0	0%
Academic subjects: e.g. science, mathematics, English	7	5.5%	5	7.7%	2	5	3	2.4%	4	11.7%
Social: changing class; not being with friends	7	5.5%	2	3.1%	5	7.9%	5	5.8%	2	5.8%
Time: increased amount	4	3.1%	1	1.5%	3	4.7%	3	3.4%	1	2.9%
Repetition	2	1.5%	2	3.1%	0	0%	2	2.3%	0	0%
Not good enough: not being as good as others; making a fool of myself	1	0.7%	1	1.5%	0	0%	0	0%	1	2.9%

Whilst the percentage of responses provide an overview of pupil attitudes, the open-ended nature of the questions asked provided more depth to the responses given, allowing reasons for some of the responses given to be identified.

The highest percent (66.4%) of responses regarding what pupils were looking forward to post transfer focused around the activities they would experience. For some this reflected an indication of an increase in the range of activities they would experience;

"I'm looking forward to doing things like trampolining, gymnastics, football and swimming" (fpB3)

"Learning how do to judo and other new sports like basketball" (mpA1)

"to different activities" (fpA1)

whilst for others it reflected a continuation of being able to participate in activities they liked;

"football and cricket and things I like" (mpB3)

"doing more of the sports I like" (mpB3)

"playing gaelic football in physical education because I play for a team and I am good at it" (mpA1)

However, responses relating to activities were also the highest percent (33%) of negative responses, indicating that pupils were not looking forward to participating in some activities. Specifically, responses indicated a concern about having to participate in activities they dislike;

"gymnastics and dance and things I don't like" (mpB3)

"football and things because I don't like it" (fpB3)

"having to do some sports I don't enjoy" (fpA1)

or indicating a perception that they would have to participate in activities they already felt competent in, suggesting a fear of repetition;

"starting to learn how to do sports I already know how to do again" (mpA1).

Activities therefore appear to be a key aspect which influences pupils' attitudes towards physical education with them reflecting individual likes and dislikes. What is less apparent is why pupils like or dislike a specific activity, although the instances of repetition may be one reason.

However emerging from the responses received are an indication of pupils perceptions of physical education in primary and secondary schools and how the

subject varies across the two. The second highest percent (6.2%) of responses from pupils indicated that they were looking forward to improved facilities and equipment;

"to have good gyms and more responsible apparatus" (fpA1)

"more apparatus" (fpB3)

"more equipment bigger gym space" (fpA1)

5.5% of pupil responses indicated that they were looking forward to physical education being more challenging in secondary school when compared with the primary school;

"it will be a change and it will also be a challenge" (mpA1)

"doing more challenges, doing harder things" (fpA1)

"we do more challenging things"(mpA1)

and that within the secondary school there was an expectations that their competence would improve;

"to learn more skills and become better" (mpA1)

"doing new sports I have not done before and improving others" (mpA1)

"more skills and lessons available" (fpA1).

However, in contrast 18.1% of responses indicated that this increased challenge and the perceived increase in effort required was an aspect pupils were not looking forward to post transfer;

"having to work harder" (mpA1)

"different more difficult activities" (fpA1).

It is therefore evident that pupils' perceptions of physical education in the primary and secondary school differs not only in terms of the activities they experience, but also the equipment and facilities they access and the level of challenge they associate with the subject resulting in changes to their levels of competence.

One key difference between primary and secondary school physical education is how pupils change for their lessons. In primary school changing for physical education tends to be done in the classroom. In some instances girls and boys may change in the same room, although common practice is for a divider to be put across, or changing to occur in separate rooms. This contrasts with secondary schools where purpose built changing rooms including shower are used. It is therefore not unexpected that pupils (11.9%) identified that changing and in particular changing

room practices - for example showering are aspects that they are not looking forward to post transfer;

"showering with other boys" (mpA1)

"going in to showers with other kids" (mpA1)

Pupils also identified that there were social aspects that they were and were not looking forward to post transfer. Positively 4.8% of responses acknowledged that socially they would have the opportunity to meet and make new friends;

"all new friends" (mpA1);

although negatively 5.5% of responses identified that there was the potential to be split from their friends;

"being split up from the boys" (fpA1)

"missing my friends" (fpA1).

Associated with the social development of the individual are the social comparisons they experience. Pupils identify that such comparison are a concern post transfer;

"not being as good as the others" (mpB3)

"doing pe things I can't do very well" (fpB3)

"making a fool of myself" (fpB3)

"I'm not looking forward to gymnastics because I'm not very good at it" (mpA1)

As well as identifying curriculum differences between primary and secondary school, pupils also identified differences in the extended curriculum offered, accounting for 3.4% percent of pupils responses.

"taking part in extra-curricular activities" (fpB3)

"I am looking forward to playing football with the school" (mpA1)

*"after school, more competition" (fpA1)*Of further interest is that 14.9% of pupils identified that there was nothing they were not looking forward to post transfer. Similarities and differences were in the rating of responses between boys and girls. Both boys and girls identified activities as the aspect they were most looking forward to (boys – 67.6%, girls = 65.3%), as well as the aspect they were not looking forward to (boys = 30.8%, girls = 34.9%). Both boys (5.8%) and girls (5.3%) were looking forward to the increased challenge post transfer, although a higher percent (boys = 21.5%, girls = 14.2%) identified this as something they were not looking forward to. Similarly, whilst 4.4% of boys and 5.3% of girls identified social

aspects as what they were looking forward to, post transfer social aspects, specifically changing and showering (boys = 10.8%, girls = 12.6%) were key aspects they were not looking forward to.

The age at which transfer occurred also impacted on the responses received. Whilst an increases in activities was ranked highest by all pupils (61% for pupils who transferred at age 11, 79% for pupils who transferred at age 12) as what they were looking forward to, it was also an aspect they were not looking forward to (29% for pupils who transferred at age 11, 50% for pupils who transferred at age 12). However differences were also evident in relation to age of transfer specifically in the ranking of aspects. Where transfer was at age 11 pupils looked forward to increased activities, increased equipment and increased challenge, compared with increased activities, academic subjects and extra-curricular activities for pupils who transferred at age 12. In respect of what they were not looking forward to, pupils who transferred at age 11 identified activities, challenge and changing compared with pupils who changed school at age 12 who identified activities, nothing and challenge.

4.6.3 Attitudes towards physical education post transfer

A second questionnaire was given to pupils after they had transferred to the secondary school. The focus of this questionnaire was to identify how a change of school has impacted on their attitudes towards physical education. For pupils who changed school at the end of year 6 this questionnaire was administered at the beginning of year 7, whilst those pupils who changed school at the end of year 7 completed it at the beginning of year 8. Results are shown in table 4.31.

Table 4.31

Percent of Positive Responses to Questions Regarding Attitudes Towards Physical Education After Transferring School for Both Boys and Girls, and for Pupils who Changed School at the End of Year 6 and Pupils who Changed School at the End of Year 7

	ALL		GENDER				TIME OF TRANSFER			
			BOYS		GIRLS		End of year 6		End of year 7	
	N	%	N	%	N	%	N	%	N	%
Have you enjoyed participating in the increased range of activities / sports?	273	94.4%	151	94.3%	122	94.5%	240	95.2%	33	89.1%
Have you enjoyed having more PE lessons?	266	91.7%	152	95.5%	114	87%	235	93.6%	31	79.4%
Have you found the lessons harder than you thought?	128	44.2%	84	53.1%	44	33.5%	116	46.4%	12	30.7%
Have found that you have repeated work?	140	48.4%	79	49.3%	61	47.2%	118	47.2%	22	15.7%

From table 4.31, 94.4% of pupils identified that they enjoyed the increased range of activities in the secondary school. Similar results were obtained for both boys and girls. However a higher percent of pupils who changed school at the end of year 6 (95.2%) enjoyed the increase in the range of activities than pupils who changed school at the end of year 7 (89.1%).

Ninety one percent of pupils enjoyed having more physical education lessons. A higher percent of boys (95.5%) enjoyed having more lessons than girls (87%), with a higher percent of pupils who changed school at the end of year 6 (93.6%) enjoying having more physical education lessons than pupils who changed school at end of year 7 (79.4%).

Only 44.2% of pupils found lessons harder than they thought they would be. However a higher percent of boys (53.1%) found lessons harder than girls (33.5%). Further, a higher percent of pupils who changed school at the age of 11 (46.4%) found lessons in the secondary school harder than the percent of pupils who changed school at age 12 (30.7%).

Almost half (48.4%) of the pupils identified that they had repeated work in the secondary school. The percentages of boys and girls who identified that they repeated work were similar. However, a much higher percentage of pupils who transferred at the end of year 6 (47%) found they repeated work than pupils who transferred at the end of year 7 (15.7%).

4.6.4 Attitudes of pupils who changed school at the end of year 6 towards physical education at the end of year 7, and the beginning of year 8 in the secondary school.

These questions were asked at the end of year 7 and the beginning of year 8 only to pupils who changed school at the end of year 6, at age 11, thereby focussing on changes that had occurred during the first year in secondary school. Questions focussed on what pupils liked (see table 4.32 and 4.33), disliked (see table 4.34 and 4.35), and what changes they would make if they were given the opportunity (see table 4.36 and 4.37). Pupils could identify more that one answer for each question, resulting in a variation in the number of responses. Analysis was conducted to identify differences between boys and girls, and between pupils who attended the different secondary schools involved in the study.

Table 4.32

What Pupils Like about Physical Education at the End of Year 7 and the Beginning of Year 8, Differences Between Boys and Girls.

End of year 7									Beginning of year 8								
All pupils			Boys			Girls			All pupils			Boys			Girls		
N	%		N	%		N	%		N	%		N	%		N	%	
99	33.3	Curriculum	68	38.4	Curriculum	39	32.7	Enjoyment	100	38.7	Curriculum	58	39.2	Curriculum	42	38.1	Curriculum
92	30.9	Enjoyment	53	29.9	Enjoyment	31	26	Curriculum	72	27.9	Enjoyment	41	27.7	Enjoyment	31	28.1	Enjoyment
42	14.1	Physical	25	14.1	Physical	17	14.2	Physical	41	15.9	Physical	22	14.8	Physical	19	17.2	Physical
21	7	Break	10	5.6	Challenge	12	10	Break	11	4.2	Break	11	7.4	Everything	5	4.5	Social
18	6	Challenge	9	5	Break	8	6.7	Challenge	11	4.2	Everything	6	4.1	Challenge	5	4.5	Break
10	3.3	Social	4	2.2	Social	6	5	Social	10	3.9	Challenge	6	4.1	Break	3	2.7	Everything
6	2	Nothing	3	1.6	Nothing	3	2.5	Nothing	6	2.3	Social	3	2	Nothing	3	2.7	Challenge
3	1	Teachers	3	1.6	Everything	2	1.6	Teachers	6	2.3	Nothing	1	.6	Social	1	0.9	Teachers
3	1	Everything	1	0.5	Teachers	1	0.8	Environment	1	.39	Teachers				1	0.9	Environment
2	0.6	Environment	1	0.5	Environment				1	.39	Environment						

Table 4.33

What Pupils Like about Physical Education at the End of Year 7 and the Beginning of Year 8 in respect of School Attended.

End of year 7									Beginning of year 8								
All pupils			A1			C4			All pupils			A1			C4		
N	%		N	%		N	%		N	%		N	%		N	%	
99	33.3	Curriculum	26	38.8	Curriculum	73	31.9	Curriculum	100	38.7	Curriculum	28	43.1	Curriculum	72	37.3	Curriculum
92	30.9	Enjoyment	20	29.9	Enjoyment	72	31.4	Enjoyment	72	27.9	Enjoyment	16	24.6	Enjoyment	56	29.0	Enjoyment
42	14.1	Physical	11	16.4	Physical	31	13.5	Physical	41	15.9	Physical	13	20	Physical	28	14.5	Physical
21	7	Break	4	6.0	Social	19	8.3	Break	11	4 2	Break	4	6.1	Nothing	10	5.2	Everything
18	6	Challenge	2	3	Everything	16	7.0	Challenge	11	4.2	Everything	2	3.1	Social	10	5.2	Break
10	3.3	Social	2	3	Challenge	6	2.6	Social	10	3.9	Challenge	1	1.5	Everything	9	4.7	Challenge
6	2	Nothing	2	3	Break	6	2.6	Nothing	6	2.3	Social	1	1.5	Break	4	2.1	Social
3	1	Teachers				3	1.3	Teachers	6	2.3	Nothing				2	1.0	Nothing
3	1	Everything				2	0.9	Environment	1	.39	Teachers				1	0.5	Teachers
2	0.6	Environment				1	0.5	Everything	1	.39	Environment				1	0.5	Environment

4.6.4.1 What pupils liked about physical education at the end of year 7 and the beginning of year 8

At the end of year 7, the highest percent of responses (33.3%) from pupils regarding what they liked about physical education were the curriculum pupils experienced to include specific activities.

In identifying the curriculum as the aspect of physical education pupils most liked, reference was by pupils to the curriculum as a whole;

"the different sports we do" (mpC4)

"I like to learn more things about different sports" (fpC4)

"I like playing sport and learning new sports" (fpA1)

"different kinds of sport" (mpA1)

or to participation in specific activities;

"I like cricket" (mpC4)

"football / volleyball" (mpC4)

"games, rounders, volleyball" (fpC4)

"gaelic football, softball, baseball" (mpA1).

At the beginning of year 8, the curriculum remained the aspects pupils most liked about physical education, accounting for 38.7% of responses. As with year 7 reasons could be seen as reflecting either the curriculum as a whole, for example;

"playing sports" (mpC4)

"learning different sports" (fpC4)

"all of the sports" (mpA1)

Or to specific activities, for example;

"doing sports that I like" (mpC4)

"rugby, football (mpC4)

"dance and swimming, rounders" (fpC4)

The amount of enjoyment pupils got from their physical education lessons accounted for 30.9% of pupil responses at the end of year 7, and was expressed by their identification of fun as a key aspect;

"they are great fun" (fpC4)

"it is fun and enjoyable" (mpC4)

"they are fun and interesting" (fpC4)

"playing and having fun" (fpA1).

At the beginning of year 8, enjoyment accounted for 27.9% of pupil responses. Similarities existed between the responses given by pupils at this time to those responses obtained at the end of year 7, for example;

"you can enjoy yourself" (fpC4)

"they are fun" (mpC4)

Although enjoyment and fun was clearly important to pupils in terms of the extent to which they liked physical education, associated with it was pupils' perception of competence;

"I like it because I think I'm quite good at it" (fpC4)

"I'm good at it so I enjoy it, its fun" (fpC4)

At the end of year 7 14.1% of pupil responses indicated that pupils liked the physical aspects of the subject. Associated with such responses were the benefits pupils felt they got from the activity. For example pupils appeared to be aware of the health benefits they got from participating in the subject;

"I like moving around a lot and moving my body about. It makes me stronger, fit and I enjoy it" (mpC4)

"they are healthy because it keeps you fit and motivated without it you're unhealthy and lazy" (fpC4)

"you keep fit" (mpA1)

"it keeps you healthy" (fpA1).

By the beginning of year 8, the percent of pupils that identified a like of the physical aspects of physical education had increased to 15.9%. As with year 7 responses, an identification of the health benefits of physical education was made, for example;

"helps you to get fitter" (fpC4)

"to make your stamina and fitness increase" (mpC4)

"it keeps me fit" (fpA1)

"they build up your stamina" (mpA1)

However, whilst the curriculum, enjoyment and the physical benefits of participating of participating in physical education were identified by pupils both at the end of year 7 and the beginning of year 8, as what they liked about physical education, 7% of pupil responses at the end of year 7 and 4.2% of pupil responses at the beginning of year 8 showed that pupils saw physical education as a break from

their normal lessons. Examples of pupil responses at the end of year 7 were as follows;

" we can get up and do something other than writing all lesson" (fpC4)

"when you don't write and think that much" (mpC4)

"you don't sit down and do nothing" (mpC4)

"we are not just sitting down all the time" (fpA1)

"it's a break from normal writing lessons" (mpA1).

Similar responses were obtained from year 8 pupils;

"there's no writing and hardly any homework" (mpC4)

"it is a lesson that we don't have to write" (mpC4)

"you get to move around unlike sitting at a table" (fpC4)

"not having to write"(fpA1)

Further, at both the end of year 7 and the beginning of year 8, pupil responses identified that they liked physical education because of the challenge they got from the subject. At the end of year 7, 6% of pupils identified this as an issues, for example;

"they are challenging" (fpC4)

"I get to challenge myself and others" (mpC4)

"the sports that challenge me so that I can get better" (mpC4)

"they are very challenging" (fpC4)

"its good to be challenged" (fpA1).

However, at the beginning of year 8, challenge accounted for only 3.9% of pupil responses, for example;

"its challenging" (mpC4)

"they challenge me" (fpA1)

"things that challenge me"(mpA1).

Pupils also identified a like of the social aspects of physical education. At the end of year 7, 3.3% of pupil responses identified that working with their friends or against each other was what they enjoyed about their lessons;

"I like working in groups with my friends" (mpC4)

"it is good to go around with your friends" (fpA1)

"it's fun and you can have a laugh with your friends as well as getting exercise" (fpC4)

At the beginning of year 8, social aspects accounted for only 2.3% of the responses obtained, for example;

"working as teams" (fpC4)

"the way we work together as a team" (fpC4)

Whilst both boys and girls identified the curriculum, enjoyment and the physical, as the aspects of physical education they liked most at the beginning of year 7, the order in which they were ranked differed. 38.4% of boys identified that they liked the curriculum they were taught, this was in contrast to the 26% of girls. Whilst 29.9% of boys identified that they liked the enjoyment they got from the subject, a higher percent of girls (32.7%) identified this as the aspect they liked most about the subject. Similar percentages of boys (14.1%) and girls (14.2%) identified that they liked the physical aspects of the subject.

At the beginning of year 8, both boys and girls ranked the curriculum, enjoyment and physical in the same order. However, a higher percent of boys (39.2%) identified the curriculum as the aspect of physical education they liked most about the subject, as compared to girls (38.1%). 27.7% of boys identified that the enjoyment they gained from the subject compared to (28.1%) of girls. Likewise, a higher percent of girls (17.2%) identified that they liked the physical aspect of the subject than boys (14.8%).

There were also differences between pupils attending the schools (A1 and C4) used to collect this data. Whilst pupils from both schools identified the curriculum as the aspect they liked most about physical education at the end of year 7, this was identified by higher percentage of pupils in school A1 (38.8%) than in school C4 (31.9%). Enjoyment and the physical aspect of the subject were also ranked in the same order within the two schools. However, there was a higher percent of responses from pupils in school C4 for enjoyment than from pupils in school A1, and a higher percent of responses for the physical aspect of the subject from pupils in school A1 than in C4.

At the beginning of year 8, pupils from schools A1 and C4 identified the curriculum, enjoyment and the physical aspects of the subject as the three aspects they liked most about the subject. A higher percentage of pupils (43.1%) at school A1 identified the curriculum as the aspect they liked most about the subject, compared with 37.3% of pupils school C4. In respect of enjoyment, a higher percent of pupils in school C4 (29%) identified this as the aspect they liked most compared

to 24.6% of pupils in school A1. The physical aspect of the subject accounted for 20% of pupils in school A1 and 14.5% of responses in school C4.

4.6.4.2 What pupils disliked about physical education at the end of year 7 and the beginning of year 8

The aspects pupils disliked most about physical education can be found in tables 4.30 and 3.31. At the end of year 7 and the beginning of year 8, the curriculum was the aspect of physical education that pupil most disliked. At the end of year 7 this accounted for 29.5% of the responses obtained and was predominantly linked to specific activities within the curriculum for example;

"I don't like cricket, it's boring and hard" (mpC4)

"I hate dance and hockey" (fpC4)

"gym and dance" (mpA1);

or in some cases to activities that pupils felt they were prevented from doing, for example;

"that girl's can't do cricket" (fpC4).

However the curriculum as a whole was also identified, and in particular the repetition of activities;

"sometimes in some lessons there are things that you already know and so it gets boring" (fpC4)

"having to do things we already know" (mpC4).

At the beginning of year 8, much of the dislike of the curriculum focused towards the perceived repetition of activities, for example;

"doing the same things again and again" (fpC4)

"when we always do the same thing for 3 – 4 weeks" (fpC4)

Although pupils continued to identify a dislike of the curriculum as a whole;

"you have to do things you do want to do" (fpC4);

or specific activities within the curriculum.

At the end of year 7, 27% of pupils identified that there was nothing they disliked about their physical education lessons. By the beginning of year 8 this figure had declined slightly to 26.3%.

Table 4.34

What Pupils Dislike about Physical Education at the End of Year 7 and the Beginning of Year 8, Differences Between Boys and Girls.

End of year 7									Beginning of year 8								
All pupils			Boys			Girls			All pupils			Boys			Girls		
N	%		N	%		N	%		N	%		N	%		N	%	
71	29.5	Curriculum	50	34	Nothing	31	34.4	Curriculum	64	28.1	Curriculum	48	38.4	Nothing	26	26.2	Physical
65	27	Nothing	40	27.2	Curriculum	16	17.2	Physical	60	26.3	Nothing	39	31.2	Curriculum	25	25.2	Curriculum
32	13.3	Physical	16	10.8	Physical	15	15.7	Nothing	34	14.9	Physical	10	8	Environment	12	12.1	Nothing
17	5.7	Social	13	8.8	Social	9	9.6	Challenge	14	6.1	Social	8	6.4	Physical	8	8	Enjoyment
12	5	Challenge	8	5.4	Time	8	8.6	Environment	14	6.1	Environment	8	6.4	Social	7	7	Teachers
11	4.5	Environment	6	4	Teachers	4	4.3	Enjoyment	12	5.2	Enjoyment	6	4.6	Time	7	7	Challenge
10	4.1	Teachers	3	2	Enjoyment	4	4.3	Social	9	3.9	Teachers	4	3.1	Enjoyment	6	6	Social
9	3.7	Time	3	2	Challenge	4	4.3	Teachers	9	3.9	Challenge	2	1.6	Teachers	4	4	Environment
10	2.2	Bored	1	0.6	Everything	1	1	Time	8	3.5	Time	2	1.6	Challenge	2	2	Time
1	0.4	Everything	1	0.6	Break	1	1	Break	4	1.7	Everything	2	1.6	Everything	2	2	Everything

Table 4.35

What Pupils Dislike about Physical Education at the End of Year 7 and the Beginning of Year 8 in respect of Secondary School Attended.

End of year 7									Beginning of year 8								
All pupils			A1			C4			All pupils			A1			C4		
N	%		N	%		N	%		N	%		N	%		N	%	
71	29.5	Curriculum	19	32.8	Curriculum	55	30.2	Nothing	64	28.1	Curriculum	20	31.3	Curriculum	55	32.4	Nothing
65	27	Nothing	13	22.4	Physical	52	28.6	Curriculum	60	26.3	Nothing	17	26.6	Physical	44	25.9	Curriculum
32	13.3	Physical	10	17.2	Nothing	19	10.4	Physical	34	14.9	Physical	8	12.5	Environment	17	10.0	Physical
17	5.7	Social	5	8.6	Environment	14	7.7	Social	14	6.1	Social	5	7.8	Nothing	12	7.1	Social
12	5	Challenge	3	5.2	Social	11	6.0	Challenge	14	6.1	Environment	4	6.3	Enjoyment	9	5.3	Challenge
11	4.5	Environment	3	5.2	Time	9	4.9	Teachers	12	5.2	Enjoyment	3	4.7	Teachers	6	3.5	Teachers
10	4.1	Teachers	1	1.7	Teachers	6	3.3	Time	9	3.9	Teachers	3	4.7	Time	6	3.5	Environment
10	2.2	Enjoyment	1	1.7	Challenge	6	3.3	Environment	9	3.9	Challenge	2	3.1	Social	5	2.9	Time
9	3.7	Time				1	0.5	Everything	8	3.5	Time	2	3.1	Everything	2	1.2	Everything
1	0.4	Everything							4	1.7	Everything						

The physical aspect of the subject accounted for 13.3% of pupil responses at the end of year 7, and rose to 14.9% of responses at the beginning of year 8. Specifically at the end of year 7, pupils identified the physical discomfort of the lesson as one issue for example;

"I get very sweaty" (mpC4)

"when you get hot and worn out" (fpC4)

"sometimes I get tired out"(mpA1)

"having to push your body to the limit" (mpA1).

At the beginning of year 8 similar pupil responses are given, for example;

"getting pushed to the limit" (mpC4)

"I can sometimes wear myself out" (fpC4)

"getting tired out" (mpA1).

Pupils also identified a dislike of the social aspects of physical education. At the end of year 7 this accounted for 5.7% of responses, and focused around issues of social comparison and team selection, for example;

"when I'm left out by my friends" (mpC4)

"the way people laugh at me when I can't do the activity properly" (fpC4)

"not being able to do things my friends can do" (mpC4).

Such comments were also reflected in the 6.1% of responses at the start of year 8, although more emphasis seems to be placed on changing;

"getting changed in front of everyone else, showers" (fpC4)

"getting changed, seeing the boys in our kit" (fpC4)

Other aspects of physical education pupils disliked included the level of challenge they experienced, for example whether the work was too hard, environmental issues, for example having to participate outside when it was cold and wet, and the teachers they experienced.

Whilst both boys and girls identified similar aspects they disliked about physical education, the order in which they were ranked differed. Thirty four percent of boys identified that there was nothing they disliked about physical education, compared to 15.7% of girls. 27.2% of boys did not like the curriculum they were taught compared with 34.4% of girls. 10.8% of boys and 17.2% of girls identified a dislike of the physical aspects of physical education.

At the beginning of year 8 pupil responses regarding what they disliked about the subject reflected those reported at the end of year 7, these being the curriculum,

nothing, and the physical. Further, the percentages of responses were roughly the same (curriculum 29.5% and 28.1%, nothing 27% and 26.3%, physical 13.3% and 14.9%).

There were differences between boys and girls in respect of the aspects they disliked about physical education at the beginning of year 8; 31.4% of boys identified that there was nothing they disliked about the subject, compared to 12.1% of girls; 32.2% of boys disliked the curriculum they were taught, compared with 25.2% of girls; 10% of boys identified a dislike of the environment in which they were expected to work compared to 4% of girls identified; 26.2% of girls identified a dislike of the physical aspects of the subject, compared with 6.4% of boys.

Pupils from schools A1 and C4 differed in what they disliked about physical education, although overall the three aspects the highest percent of pupils disliked were the same. The highest percent of pupils from school A1 (32.8%) identified they disliked the curriculum as compared with pupils in school C4 (28.6%). 22.4% of pupils from school A1 identified a dislike of the physical aspects of the subject, compared with 10.4% of pupils in school C4; 30.2% of pupils in school C4 identified that there was nothing they disliked about their physical education lessons, compared to 17.2% of pupils in school A1.

At the beginning of year 8 there were differences between pupils attending schools A1 and C4 in respect of what they disliked about physical education; 31.3% percent of pupil responses from school A1, and 25.9% of responses from pupils in school C4 disliked the curriculum; 26.6% of pupils' responses from school A1, and 10% from school C4 identified a dislike of the physical aspects of the subject; 12.5% of pupils in school A1 identified a dislike of the environment in which they were taught compared with 3.5% of pupils in school C4. However, 32.4% of pupils in school C4 identified that there was nothing they disliked about the subject compared to 26.6% in school A1.

4.6.4.3 What pupils would change about physical education at the end of year 7 and the beginning of year 8

The aspects of physical education pupils would like to change at the end of year 7 and the beginning of year 8 are shown in tables 4.36 and 4.37.

Table 4.36

What Pupils would Change about Physical Education at the End of Year 7 and the Beginning of Year 8, Differences Between Boys and Girls.

End of year 7									Beginning of year 8								
All pupils			Boys			Girls			All pupils			Boys			Girls		
N	%		N	%		N	%		N	%		N	%		N	%	
112	46.6	Curriculum	65	45.1	Curriculum	47	49.4	Curriculum	101	46.1	Curriculum	61	48	Curriculum	40	41.2	Curriculum
53	22	Time	40	27.7	Time	13	13.6	Time	41	18.7	Time	28	22	Time	13	14.1	Time
32	13.3	Nothing	24	16.6	Nothing	8	8.4	Physical	36	16.4	Nothing	26	20.4	Nothing	10	10.8	Nothing
12	5	Physical	6	4.1	Social	8	8.4	Nothing	12	5.5	Environment	6	4.7	Environment	8	8.6	Enjoyment
9	3.7	Teachers	4	2.7	Physical	7	7.3	Teachers	8	3.7	Teachers	2	1.5	Social	3	3.0	Social
8	3.3	Social	2	1.3	Enjoyment	4	4.2	Enjoyment	8	3.7	Enjoyment	2	1.5	Teachers	6	6.5	Environment
6	2.5	Enjoyment	2	1 3	Teachers	4	4.2	Environment	5	2.3	Physical	1	0.7	Challenge	6	6.1	Teachers
4	1.6	Environment	1	0.6	Challenge	2	2.1	Social	5	2.3	Social	1	0.7	Physical	4	4.0	Physical
2	0.8	Challenge				1	1	Everything	3	1.4	Challenge				2	2.1	Challenge
1	0.4	Everything				1	1	Challenge									

Table 4.37

What Pupils would Change about Physical Education at the End of Year 7 and the Beginning of Year 8 in respect of the Secondary School Attended

End of year 7									Beginning of year 8								
All pupils			A1			C4			All pupils			A1			C4		
N	%		N	%		N	%		N	%		N	%		N	%	
112	46.6	Curriculum	27	45.8	Curriculum	85	47.2	Curriculum	101	46.1	Curriculum	22	34.4	Curriculum	79	50.3	Curriculum
53	22	Time	12	20.3	Nothing	43	23.9	Time	41	18.7	Time	12	18.8	Time	31	19.7	Nothing
32	13.3	Nothing	10	16.9	Time	20	11.1	Nothing	36	16.4	Nothing	12	18.8	Environment	29	18.5	Time
12	5	Physical	3	5.1	Enjoyment	9	5	Physical	12	5.5	Environment	5	7.8	Enjoyment	5	3.2	Social
9	3.7	Teachers	3	5.1	Physical	9	5	Teachers	8	3.7	Teachers	5	7.8	Nothing	4	2.5	Physical
8	3.3	Social	3	5.1	Social	5	2.8	Social	8	3 7	Enjoyment	4	6.3	Teachers	4	2.5	Teachers
6	2.5	Enjoyment	1	1.7	Everything	4	2.2	Environment	5	2.3	Physical	1	1.6	Physical	3	1.9	Enjoyment
4	1.6	Environment				3	1.7	Enjoyment	5	2.3	Social	1	1.6	Challenge	2	1.3	Challenge
2	0.8	Challenge				2	1.1	Challenge	3	1.4	Challenge						
1	0.4	Everything															

At the end of year 7 the highest percent (46.6%) of pupils identified that they would like to change the curriculum they experienced in their physical education lessons. Specifically pupils identified a desire to have greater choice regarding the activities they would experience;

"I'd get more choice" (fpC4)

"a wider choice" (mpC4)

"choices of what you want to do" (mpA1)

or to focus on specific activities;

"the subjects (athletics)" (mpC4)

"more cricket" (mpC4)

"play football all the time" (mpC4)

"do more football" (fpA1)

"football, basketball all the time" (mpA1)

However pupils identified a desire to be able to participate in activities that they were currently not able to do;

"I would let the girls do football as well as the boys" (fpC4)

"girls could do the same as the boys" (fpC4)

A similar percent (46.1%) of pupil responses at the beginning of year 8 also indicated a desire to change the physical education curriculum. As with responses obtained for year 7, the focus in year 8 was towards increased choice, for example ;

"choose what we want" (fpC4)

"decide what sports we do" (mpC4)

"to pick your groups and do a lesson you want" (fpC4)

"that we could pick our sport" (fpA1).

specific activities, for example;

"play games all the time" (mpA1)

"more of the lesson you want to do, cricket my best" (mpA1).

and for girls to be able to participate in the same activities as boys;

"that the girls get to play football as well as the boys" (fpC4)

"that girls can do swimming" (fpC4)

The time allocated to physical education was identified by 22% of pupils at the end of year 7 and 18.7% of pupils at the beginning of year 8 as the second aspect they would most like to change. Predominantly at the end of year 7 these focused on increasing the time allocated to the subject;

"that you had them more than twice a week" (fpC4)

"pe more often and a longer time on pe each lesson" (mpC4)

"I will make sure that there is more time for PE lessons" (mpC4)

"to have more time" (mpA1)

"more lessons" (fpA1).

Or to increase the time spent on each activity;

"longer modules" (mpC4)

"doing double lesson of swimming" (fpA1).

At the beginning of year 8 similar responses were obtained;

"longer lessons" (mpC4)

"have a two hour lesson" (mpC4)

"it was longer (more than twice a week)" (fpC4)

Of further interest, pupils reported at both the end of year 7 (13.3%) and the beginning of year 8 (16.4%) that they was nothing that they would change about their physical education lessons.

Similarities were also evident in the ranking of responses between boys and girls regarding what they would change. 45.1% of boys and 49.4% of girls identified the curriculum as the aspect of physical education they would like to change. Similarly both boys (27.7%) and girls (13.6%) identified the time allocated to physical education as an aspect they would like to change. Sixteen point six percent of boys identified that there was nothing about the subject they would like to change, compared with 8.4% of girls. 8.4% of girls identified that they would like to change the physical aspect of the subject, compared with only 4.1% of boys.

At the beginning of year 8, curriculum (46.1%), time (18.7%) and nothing (16.4%) were again identified as the aspects the highest percent of all pupils would like to change about their physical lessons. Both boys and girls ranked these three aspects in the same order. Forty eight percent of boys and 41.2% of girls identified that they would like to change the curriculum they were taught; 22% of boys and 14.1% of girls identified they would like to change the amount of time allocated to the subject; 20.4% of boys and 10.8% of girls identified that there was nothing they would like to change about their physical education lessons.

Similarities and differences were also evident between the secondary school pupils attended. At the end of year 7, the three aspects the highest percent of pupils from both school A1 and C4 would change were the curriculum, the time allocated to

physical education and nothing. However, the order in which they were ranked differed. Forty five point eight percent of pupils in school A1 and 47.2% of pupils in school C4 identified that they would like to change the curriculum. A higher percent of pupils from school C4 (23.9%), identified they wanted to change the time allocated to the subject compared with 16.9% of pupils at school A1. Twenty point three percent of pupils in school A1, and 11.1% of pupils in school C4 identified that there was nothing they would like to change about their physical education lessons.

At the beginning of year 8 the highest percent of pupils from both schools identified they wanted to change the curriculum they were taught. However, there was a higher percent of responses from pupils in school C4 (50.3%), than pupils in school A1 (34.4%). A similar percent of responses (A1 – 18.8%, C4 – 18.5%) identified they would change the time allocated to the subject. Eighteen point eight percent of pupils in school A1 would change the environment in which they were taught, in particular having to work outdoors or walk to their playing fields, where as 19.7% of pupils in school C4 would not change anything about their physical education lessons.

4.6.5 Pupils Interviews about attitudes

Results of the interviews about attitudes conducted with pupils are reported in this next section. Quotes are provided from the group interviews conducted. Pupil interviews both at primary and secondary school indicated they liked physical education. Reasons for this were identified as the range of activities undertaken within lessons, and the perceived fun element associated with the subject. Further, acknowledgement was made that it contributed to a healthy lifestyle.

"I enjoy physical education because you do lots of different sports" G3

"because it's fun and you exercise" G2

Primary school pupils, particularly also identified that physical education was a subject that meant that they had a break from their normal classroom lessons

"you get out of the classroom and don't do all written stuff like that" G1

Whilst both primary and secondary school pupils enjoyed the subject overall, where a dislike was identified it was associated with the activities undertaken within the lesson. Thus it seems that some pupils enjoyed the activities whilst others did not.

Pupils reported that the effort they put in to the lesson reflected the level of boredom they felt. Boredom was associated with a lack of participation, for example:

"sitting around" G3

"it's always boring when we're like sitting on the floor, and we're not like doing anything" G3

Secondary school physical education was seen to be more challenging then in primary school. This tended to be associated with the physical aspects of the subject.

"because you have to run around" G2

However pupils reported that it was only challenging if there was no repetition.

"sometimes its challenging and sometimes its easy, it depends if we go over things we did in primary schools" G3

Further differences between primary and secondary physical education were identified as the activities undertaken in secondary school, the equipment available for use within lessons, the time allocated to the subject and the teaching groups (mixed or single sex).

"In the school we do a lot more sports, in primary school we had to work in smaller groups, and like we were mixed with the boys all the time, but in this school we're just with the girls" G3

"I think in secondary school we do more things like volleyball and hurdles and things like that and we didn't really get the chance in our primary school" G3

"In primary school we used to have less time to do physical education but now in secondary school we have a lot more time" G3

In identifying the differences between mixed and single sexed teaching, boys showed little preference, although teachers were identified as one benefit of mixed sex teaching. However girls' preference for mixed sex teaching demonstrated a need to be challenged within lessons.

"mixed cos you've got like boys and girls, you get like mixed groups, like you get different standards" G3

"mixed groups cos we get to work with our own level" G3

Overall physical education in the secondary school was seen by pupils to be more preferable than in the primary school

"I've found it more enjoyable because in primary school we didn't do as much as we do and I'm learning more about different sports I didn't know much about" G3

"we used to sit around and not learn much, so here's better" G3

4.6.6 Summary

Results showed that the extent to which pupils liked their physical education reflected the activities they were taught, their perceived level of enjoyment and the physical benefits they gained from participating most notably in respect of health. Similarities in the ranking of these aspects were evident at both the end of year 7 and the beginning of year 8.

Looking at what pupils disliked about physical education again showed similarities between the end of year 7 and the beginning of year 8, with the curriculum taught and the associated physical discomfort identified by both cohorts. However, responses also indicated that 25% of pupils are happy with the physical education they received identifying that they was nothing they disliked about the subject.

In terms of what pupils would change, result reinforced aspects of the subject they had previously identified as disliking for example wishing to change aspects of the curriculum they were taught. Further, pupils identified a desire to increase the time allocated to the subject. Pupils reinforced a like of their current provision further by identifying that there was nothing they would change.

When looking at interview data, differences were identified by pupils between primary and secondary physical education, these predominantly being in regard to the activities taught, the level to which they were challenged, and the teaching approaches employed in the delivery of the subject.

4.7 Continuity and progression – Interviews and Questionnaires with Teachers

4.7.1 Primary teachers understanding of continuity and progression

Data was collected from primary school teachers using questionnaires to identify their understanding of continuity and progression in physical education, and the extent to which continuity and progression were promoted between the primary and secondary school involved in this study.

Primary teachers who responded to this question showed a general understanding of continuity and progression in physical education, identifying a need to build upon previously learnt skills within physical education. Responses included:

'Development of themes previously taught / strands. Build upon skills to a higher level' (TA1a)

'Continuity ensures that children follow schemes which develop ensuring consistency. To provide structured development of understanding and skills with opportunities to reinforce and improve' (TA2e)

'Develop understanding and skills through the key stages' (TC4g2)

'Ensuring that skills taught are consolidated and extended each year. Build upon knowledge that pupils already have' (TC4h)

Other responses identified a need for continuity and progression to be reflected as a broader concept than just curriculum content for example a need to maintain consistency in respect of teaching styles and strategies identifying:

'Maintaining and continuing a programme in a curriculum area. Following similar styles and strategies. Carry forward and improve' (TA1c)

One respondent identified the implications of a lack of continuity and progression:

'without it pupils become bored and teaching becomes repetitive' (TA1b)

4.7.2 Primary school teachers' perceptions of the importance of continuity and progression

Responses showed that the primary school teachers saw the promotion of continuity and progression as of great importance. Issues highlighted related to the need to avoid repetition and to develop a curriculum that builds upon prior learning:

'Essential! To ensure that previous experiences and learning outcomes are developed consistently through structured activities' (TA2e2)

'Extremely important. Children need to learn skills in a logical order and develop them each year' (TC4h)

'Yes as pupils need to continue to progress and develop rather than repeat work' (TA1b)

'Yes in order for children to remain motivated and to be stretched to reach potential' (TA2e1)

4.7.3 Links between primary and secondary feeder schools in respect of physical education

Results regarding the links with feeder schools were varied. In some instances primary school teachers identified themselves as having very strong links with their secondary school for example;

'Excellent: lots of involvement with PE' (TA1a)

'A lot. The secondary school comes in and provides support and instruction in a wide variety of PE and sporting areas. Our school attends the secondary school for lots of activities' (TA1c).

Where links were not physical education specific, some schools identified that secondary teachers attended lessons and provided assistance within the primary school for example;

'Links to 3 transfer schools with meetings and classroom lessons taken by secondary school teacher' (TC4g1).

Others identified that the links extended only as far as providing opportunities for pupils to visit the secondary school prior to transfer and possibly be taught a lesson for example;

'Year 6 visit their new school and have a lesson. A teacher comes to our school to talk to the pupils not sport related' (TC4h).

4.7.4 Primary school teachers knowledge of curriculum taught in secondary school

Some primary school teachers identified that they had knowledge of what was being taught within the secondary school for example;

'Yes to a certain degree' (TC4g1).

Others had some previous experience of physical education within the secondary school and had trained as a physical education specialist;

'Not really. I know what is taught in secondary schools because of my experience as a secondary school teacher' (PE specialist) (TA1c).

On the other hand others had no knowledge of the curriculum taught in the secondary school.

4.7.5 Primary school teachers perceptions of the need for curriculum agreement

Some primary school teachers identified there should be some form of agreement between primary and secondary schools in respect of curriculum content, for example;

'Yes, to ensure progression and improvement of skills' (TC4g1).

Some primary teachers identified the need for secondary schools to acknowledge the work completed within the primary school, for example;

'Primary starts from the groundwork level and works up. I often think that secondary schools have little understanding of where pupils are starting from' (TA1c).

However the difference in respect of teaching experience between primary and secondary schools was also identified as important;

'The delivery of the curriculum is different in KS2 to KS3, however, liaison with transfer / feeder schools can only improve children's learning experience' (TA2e2).

Further, although there was a desire to know what was being taught in the primary and secondary schools, this may not result in changes to practise, for example;

'It would be useful to know what they taught, but it would not necessarily change what we teach in primary school' (TC4h).

4.7.6 Primary teachers provision of assessment materials

The transfer of assessment material between primary and secondary schools also varied. Most teachers reported they provided general assessment material focussing on academic attainment in particular SAT's results;

'Yes SATs and teacher assessments' (TA2e1).

Few provided assessment data regarding attainment for physical education;

'Not in PE: unless children gifted/able or far below national averages' (TA1a).

Information on assessment in physical education tended to focus on identifying pupils who were deemed gifted / talented;

'Quite limited for PE, though references to SEN and more able children, including those who represent the school in sport'. (TA2e2).

Further information regarding physical education tended to be verbal rather than formalised.

4.7.7 Primary teachers perception of the usefulness of the material transferred

Responses regarding the extent to which primary teachers felt that the information provided was useful to the secondary school varied, with most schools reporting that it must be of some use, for example;

'Usually they find out this information very quickly! But it is a help, I'm sure as they wouldn't ask for it otherwise!!!' (TA1a).

In contrast, a number of teachers questioned whether it was used at all;

'Probably not as they'll make their own judgements' (TA1b).

Thus primary teachers felt that secondary teachers were likely to find the information out from the pupils within the first few months anyway, therefore adopting a free start approach, for example;

'My experience is that a lot of secondary schools feel that the student arrives a first day and it's a new start – they forget what happened at your primary school attitude' (TA1b).

Further, primary teachers felt that the information would mostly be used for personal / social reasons, although the exact use of information was not fully understood;

'to inform academic and friendship groups' (TC4g1).

'Not really. I would expect that it would be used for grouping / setting etc. Setting targets, monitoring progress, personal profiles' (TA1c),

'I would think to help with grouping children' (TA1b).

4.7.8 Staff Interviews with Secondary School Heads of the Physical Education Department

Staff interviews with secondary heads of department in the three secondary schools involved in the study showed that two (school A1 and B3), both designated sports colleges, identified themselves as having established physical education links with their feeder primary schools. However not all primary schools that sent pupils to

the secondary schools were involved in such links. In school A1, due to the large number of primary feeder schools, priority was given to the feeder schools that sent the greatest number of pupils.

'Last year there were 45 feeder primary schools, however the majority came from about 8 or 9 all of which we work with' (TA1).

The types of links specifically for physical education focussed around the provision of professional development; in the form of course organisation and visits by secondary school staff into the primary school. In school A1, 2 hours of secondary staff time per week was spent in each primary feeder school. This was spent mostly taking lessons within the primary school. In School B3, whilst secondary school staff offered classroom support in the primary school, the emphasis was towards empowerment of primary staff rather than teaching pupils.

'all receive 2 hours curriculum support time each week throughout the year. On top of that we get, we give them festivals' (TA1).

Links between the primary and secondary schools appeared to be directed by secondary teachers, although schools A1 and B3 both acknowledged that there was a need for primary school colleagues to be involved in the process, with primary staff visiting and working within the secondary school.

'Not at as much [primary schools visiting the secondary school] *as we wanted to do. That is one of our objectives to do that and we are working to do that; definitely to get more and more primary schools coming here, teachers coming here' (TA1).*

The establishment of links were seen by secondary schools as effective, allowing standards in physical education to be improved. However, there were limitations to the establishment of links. Secondary school staff identified constraints in primary schools in respect of time, staffing and curriculum pressures.

'I think the relationships with the primary schools have grown well over the years. I think we're learning to be a bit more honest with each other as well, they're telling us when they're not happy about things, but it's a growing relationship. Even when things have gone badly we still work towards it so that's I think compared to other situations which are starting up now, new primary schools coming on board through the school sports co-ordinators partnership, I think it shows how far we

have come because there are other primary schools who are saying they are a bit dubious about doing what we are suggesting to them but the ones we are currently working with are very happy to keep things going as they can see its value basically' (TA1).

'Staff changeovers have been the big problem. Particularly change of head that's the most difficult one. That's because the new head teacher that comes in haven't actually signed up to the agreement as such and they start to question things and they say why am I doing this and you say because according to the requirements of you being on this, and they say but I didn't sign up for it. It's really difficult to come back with anything then because they're quite right, they didn't sign up for it. It's the previous head teacher so therefore there's one case where they are saying I'm not prepared to release my staff or get my staff to do all of this because that's too much work for them so that means that if there not going to do it who is going to do it? Because the head is say he's not got the time it means that I've got to do it myself, which is fine, but it means that I've either got to lose time for someone else [another school] *or I spend more of my own time and it does work out a big, big job, when you're trying to do that and your own role for one school' (TB3).*

'I think it's a hard process, mainly because of the pressures that primary school teachers are under, with the introduction of numeracy and literacy, physical education isn't the highest priority, its still of priority to the school, but when you go in there to do some stuff, there more likely to say thank you very much get on with it rather than we will input into it'(TA1).

Whilst continuity and progression were identified by secondary school heads of department as important, the extent to which they were promoted in physical education between primary and secondary school was limited. Some work was being undertaken in both schools A1 and B3 with links established in respect of curriculum content and assessment of attainment. However these were under-developed.

'because we have specialist sports here, we've offered those specialist sports to primary schools so that means that they will all have done gaelic football ..... all will have done rugby ..... which means obviously when they come to the school they will be fine' (TA1).

'we've given them cover to take time out of school to design their curriculum map, after they've had the curriculum mapping session, so they've designed their own curriculum map.....So in terms of what they are teaching and when they are teaching it, sort of leave it to them, but I have said that if they need any help then I'm available. (TB3).

Where links were established, designated members of staff had responsibility for this role. Both schools, A1 and B3, with these established links acknowledged that their sports college status had provided them with the opportunity to develop these links – most notably in respect of financial support, time and increased staffing levels.

'You wouldn't have someone in post to do it. With the best will in the world, if I am being completely honest I would say that without the point or the responsibility to do it no-one is going to turn around and say oh yeh I do that. Because at the end of the day, I'd do it if the money was available otherwise I'm here as a PE teacher and I'll teach PE. I'm a secondary school teacher and I'll teach a couple of lessons of something else' (TB3).

'we have a girl who's a paid member of physical education staff' (TA1).

'because we are given the money and the time to do that, although I've heard of many other schools that do it that aren't sports colleges. Its obviously the extent to which they can do it is more limited' (TA1).

Whilst schools A1 and B3 were actively involved in the promotion of links specifically towards physical education, in terms of general liaison activities, all three schools identified pastoral transition for pupils in respect of visits to schools prior to transfer, with some schools providing induction programmes post transfer.

4.7.9 Summary

Results from teacher interviews / questionnaires showed a general understanding of continuity and progression, and was seen by both Primary and Secondary Staff as important. Links between schools were evident although knowledge between schools regarding curriculum content either pre or post transfer was limited, with limited assessment information material provided during transfer. Where links were evident they reflected a social-pastoral bias. Constraints to the

establishment of links between schools were identified as time, staffing issues and finance.

4.8 Chapter Summary

This chapter has looked at results of data analysis on pupils' attainment, self-esteem, self-motivation and attitudes and teachers views about continuity and progression.

Significant increases in attainment, self-esteem and self-motivation were shown between the end of year 6 and the beginning of year 8 for pupils from whom data was collected at all four data collection points.

Further, significant differences were shown between boys and girls, those pupils who changed school at the end of year 6 when compared with pupils who changed school at the end of year 7, and between the different secondary schools attended. Whilst significant differences were shown, inconsistencies in changes were evident with both increases and decreases in levels shown during the study period.

Significant relationships were shown between attainment and self-esteem and self-esteem and self-motivation between the end of year 6 and the beginning of year 8. Whilst significant relationships between attainment and self-motivation were shown, these were not consistent. Further, standard multiple regressions showed that variance in self-esteem could be attributed to self-motivation and attainment.

Although pupils expressed positive attitudes towards physical education, differences were evident over time and between boys and girls. Results showed a significant decline in the number of pupils who would choose to participate in physical education.

Acknowledgement was made by teachers regarding the importance of continuity and progression within the curriculum, although practical examples of how this was being achieved within schools was limited, with constraints to the development of links between schools identified.

The next chapter will discuss these findings and look at their implications.

Chapter 5: Discussion

5.1 Introduction

The aim of this chapter is to discuss the main results of the study and how they relate to previous research. The implications of the results will be identified and some recommendations for schools made. Limitations of the research will also be discussed, with suggestions made as to areas requiring further research.

Most previous research on the transfer of pupils from primary to secondary school has focussed on the core subjects of English, mathematics and science, and therefore generalisations and comparisons to physical education may not be applicable.

The purpose of this research was to identify any changes in attainment, self-esteem, self-motivation and attitudes in physical education between the end of year 6 and the beginning of year 8 (during the transfer from primary to secondary school), and to establish any differences between boys and girls, the age at which transfer occurred and the secondary school attended. Consideration was also given to the promotion of continuity and progression between schools.

The specific research question addressed was:

> What changes occur to attainment, self-esteem, self-motivation and attitudes in physical education between the end of year 6 and the beginning of year 8 and are there any differences between boys and girls, the age at which transfer occurs or between the secondary school attended?

From this research question the following hypothesis were proposed:

Hypothesis 1

There will be a significant increase in attainment, self-esteem and self-motivation, between the end of year 6 and the beginning of year 8.

Null Hypothesis 1

There will be no difference in attainment, self-esteem and self-motivation, between the end of year 6 and the beginning of year 8.

Hypothesis 2

Boys will have significantly higher attainment, self-esteem and self-motivation than girls.

Null Hypothesis 2

There will be no difference in attainment, self-esteem and self-motivation between boys and girls.

Hypothesis 3

Pupils who change school at the end of year 6 will show significantly lower attainment, self-esteem and self-motivation when compared with pupils who change school at the end of year 7.

Null Hypothesis 3

There will be no difference in attainment, self-esteem and self-motivation between pupils who change school at the end of year 6 compared with pupils who change school at the end of year 7.

Hypothesis 4

Pupils who attend different secondary schools will have significantly different attainment, self-esteem and self-motivation.

Null Hypothesis 4

There will be no difference in attainment, self-esteem and self-motivation between pupils who attend different secondary schools.

Hypothesis 5

There will be positive relationships between attainment and self-esteem, attainment and self-motivation, self-esteem and self-motivation.

Null Hypothesis 5

There will be no relationships between attainment and self-esteem, attainment and self-motivation, self-esteem and self-motivation.

Hypothesis 6

Attitudes to physical education will be significantly more positive in the primary school than the secondary school, and for boys than girls.

Null Hypothesis 6

There will be no difference in attitudes towards physical education between primary and secondary school and between boys and girls.

Data analysis was conducted longitudinally on those pupils for whom data was collected at each of the 4 data collection points allowing any trends between the end of year 6 and the beginning of year 8 to be identified. Cross-sectional analysis was conducted at each of the 4 data collection points allowing for differences amongst pupils to be identified at the end of year 6, the beginning and end of year 7 and the beginning of year 8, specifically differences between boys and girls, age of transfer and the secondary school attended.

The focus of the next section of this chapter is to identify whether the proposed hypotheses were rejected or accepted. A more general discussion of the findings is then provided.

5.2 Differences between the end of year 6 and the beginning of year 8

Results showed that there were significant increases in pupils' attainment self-esteem and self-motivation between the end of year 6 and the beginning of year 8. Thus the first hypothesis can be accepted.

Although there was an overall increase in attainment between the end of year 6 and the beginning of year 8, attainment declined between the end of year 6 and the beginning of year 7. Self-esteem and self-motivation rose continually throughout the research period.

5.3 Differences between Boys and Girls

Results showed that boys had significantly higher attainment, self-esteem and self-motivation than girls, thus the second hypothesis can be accepted. Boys had significantly higher levels of attainment and self-esteem than girls at all 4 data collection points. However, there were significant differences in levels of self-motivation only at the end of year 7 and the beginning of year 8, with boys having significantly higher levels of self-motivation than girls.

5.4 Differences between Age of Transfer

Results showed that at the beginning of year 7 pupils who changed school at the end of year 6 had significantly lower attainment than pupils who changed school at the end of year 7. Further, pupils who changed school at the end of year 6 had significantly higher attainment at the beginning of year 8 than pupils who changed school at the end of year 7.

Significant differences in self-esteem were only evident at the beginning of year 7, with pupils who changed school at the end of year 6 showing significantly higher levels of self-esteem than pupils who changed school at the end of year 7.

Pupils who changed school at the end of year 6 showed significantly higher self-motivation at the beginning and end of year 7 and the beginning of year 8 than pupils who changed school at the end of year 7.

Thus, whilst post transfer attainment was significantly lower for pupils who had changed school, self-esteem and self-motivation were significantly higher, therefore the hypothesis can only be accepted in respect of attainment, and must be rejected in respect of self-esteem and self-motivation.

5.5 Differences between Secondary school attended

Results showed that there were significant differences in attainment, self-esteem and self-motivation according to the secondary school attended. Therefore the fourth hypothesis can be accepted.

At the beginning of year 7 pupils in school B3f demonstrated significantly higher attainment than those pupils attending schools A1 and C4. At the end of year 7 pupils who attended school C4 showed significantly higher attainment than pupils in schools A1 and B3. At the beginning of year 8, pupils in school A1 showed significantly higher attainment than pupils in schools B3 and C4.

Pupils in schools A1 and C4 showed significantly higher self-esteem at the beginning of year 7 compared with pupils in school B3f.

At the beginning of year 7, pupils in schools A1 and C4 showed significantly higher self-motivation than pupils in school B3. At the end of year 7, pupils in school C4 showed significantly higher self-motivation than pupils in schools A1 and B3. At the beginning of year 8, pupils in school C4 showed significantly higher levels of self-motivation than pupils in school B3.

5.6 Relationships

There were significant positive relationships between attainment and self-esteem, attainment and self-motivation, self-esteem and self-motivation between the end of year 6 and the beginning of year 8 between boys and girls, age of transfer and secondary school attended, allowing the fifth hypothesis to be accepted. However, relationships were not consistent throughout the research period.

Significant positive relationships were found between attainment and self-esteem and self-esteem and self-motivation at all 4 data collection points. Significant positive relationships were found between attainment and self-motivation at the end of year 7 and the beginning of year 8.

Results from multiple regression analysis showed that changes in self-esteem could be attributed to self-motivation and attainment, with self-motivation being the largest contributor.

5.7 Attitudes

There was a significant difference in the percent of pupils who would choose to participate in physical education during the study period. However, there were no further significant differences in attitudes towards physical education between boys and girls or between primary and secondary school. Thus the sixth hypothesis can only be partially accepted.

5.8 General discussion

Research suggests that during movement both within and between schools, pupils experience a number of changes predominantly in the areas of; attainment (Doyle & Herrington, 1998; Galton et al., 1999; QCA, 2002; Sainsbury, et al., 1998), self-esteem (Eccles, et al., 1989; Hirsch & Rapkin, 1986; McCarthy & Hoge, 1982), motivation (Bouffard & Couture, 2003; Chen, 2001) and attitudes (Anderson, et al., 2000; Coe, 1984). However results have been found to be contradictory, reporting both positive and negative changes.

5.8.1 Changes between the end of year 6 and the beginning of year 8

In this study, significant increases in attainment, self-esteem and self-motivation were found between the end of year 6 and the beginning of year 8. Thus, results of this study support findings from previous research of increases in attainment, self-esteem and self- motivation (Doyle & Herrington, 1998; Galton et al., 1999; OFSTED, 2002; QCA, 2002; Sainsbury et al., 1998; Williams & Howley, 1989). Whilst much of this previous research has focused on subjects other than physical education, these results suggest that physical education follows a similar pattern to other curriculum subject areas.

Pupils develop progressively more complex skills as maturation occurs, as reflected in the theories and models of development. Thus, during development and maturation, basic movement skills are acquired, consolidated and then applied within other contexts. The acquisition, consolidation and application of progressively more complex skills, is reflected in the National Curriculum requirements for physical education as identified within the physical education attainment targets (see appendix A).

It is expected that there will be an increase in attainment over time. In fact, it would be of great concern if there were a decrease in attainment over a sustained period of time. What is unclear is the extent to which these increases reflect the natural maturation of children with its associated acquisition and consolidation of skills, or are associated with changes in educational practice between phases of education. Further, it is not clear whether increases in attainment can be considered good, or whether pupils could be challenged to achieve more and raise their attainment further. Results suggest that there are differences in attainment according to the secondary school attended. Thus, this would suggest that the attainment of pupils may have the potential to be raised further at least in some schools, and for some of the pupils involved in the study. However, further research is needed to investigate whether pupils are being challenged fully. In doing so, it would allow for the identification of teaching strategies and curriculum content that mirror more closely the needs of pupils, allowing them to achieve their maximum attainment.

Significant increases in self-esteem between the end of year 6 and the beginning of year 8 also support previous research findings (Chubb et al., 1997; McCarthy & Hoge, 1982; Rosenberg et al., 1995). Piaget and Inhelder (1969) linked development in the affective domain overtime to cognitive development, stating "The affective and social development of the child follows the same general process [as cognitive development], since the affective, social and cognitive aspects of behaviour are in fact inseparable" (p.114). Thus, as attainment increases there is likely to be an increase in self-esteem. Results of this present study showed significant positive relationships between attainment and self-esteem throughout the study period, with pupils who demonstrated higher attainment demonstrating higher self-esteem. Such findings support previous research (Bachman & O'Malley, 1977; Chubb et al., 1997; Hirsch & Rapkin, 1986; Ireson et al., 1999) in the core subjects, e.g. English, mathematics and science, and physical education (Fox, 1988b). Thus, it is suggested that there are similarities between academic subjects and a practical subject such as physical education.

Results of this current study showed significant increases in self-motivation between the end of year 6 and the beginning of year 8. Research is limited on changes to self-motivation over time, so it is not possible to link current research findings to research conducted previously. However, significant positive relationships were also found between self-motivation and attainment and self-

motivation and self-esteem. Attainment has been seen both as motivational (Shen, 2001; Shropshire et al., 1997; Trouillard et al., 2002) and de-motivational (Alves-Martin et al., 2002; Ames, 1992; Schachar et al., 2002), with higher attainment reflected in higher motivation and conversely lower attainment reflected in lower motivation. Thus, if levels of attainment are increasing and if attainment acts as a motivator there is the likelihood of an increase in self-motivation, a premise reinforced by the findings of this research. However, it is unclear whether attainment is acting as a self-motivator, or if self-motivation results in an increase in attainment. Further research is needed to investigate this.

The significant relationships between self-esteem and self-motivation are also not unexpected. Gallahue and Ozmun (1995) stated self-esteem "is the value that one attaches to his or her unique characteristics, attributes and limitations" (p.345). Gage and Berliner (1984) proposed that motivation is linked to the value attached to the activity being undertaken, whereby the individual is more motivated if greater value is attached to the activity. Therefore, if individuals value the activity they are undertaking and have high self-motivation, it can be suggested that they will also demonstrate higher self-esteem towards that activity, because they are involved in the activity for intrinsic rather than extrinsic purposes.

Results of attitude questionnaires showed a decrease between the end of year 6 and the beginning of year 8 in the percent of pupils who looked forwarded to physical education, participated in extra-curricular activities and would choose to participate in physical education. Research (Shropshire et al., 1997) has established that attitudes towards physical education can be moulded within the primary school. As pupils mature, research (Chen, 2001) identified a change in the interest they exhibit towards the activities they undertake in physical education e.g. whether the activities available are appropriate to individual needs, and the reasons for participation, e.g. social reasons become more important. It is important to acknowledge that attitudes are evaluations made by the individual against the activity being undertaken, resulting in either a positive or negative behaviour (Digelidis et al., 2003; Gallahue & Ozmun, 1995). Positive attitudes are reflected in, for example, continuing participation in a given activity, whereas negative attitudes are reflected in, for example, the withdrawal of the individual from the activity when that activity is no longer compulsory. Whilst withdrawal from physical activity within physical education is limited due to the compulsory nature of the subject, it is possible for

pupils to demonstrate changing attitudes through, for example, the forgetting of kit or making excuses not to take part. Negative attitudes may also be demonstrated by not participating in extra-curricular activities or physical activity outside school.

Thus, there is a need in both primary and secondary schools to look at the curriculum taught and extra-curricular activities offered, with a view to providing a curriculum both within and outside of curriculum time that reflects the diverse needs and interests of the individuals for which it is designed. Further, practices within schools need to promote positive attitudes towards physical education in order that participation rates are maintained. This may be achieved through looking at the teaching strategies used within schools to ensure that they actively promote positive attitudes and positive role models.

Thus, results show that there are significant increases in attainment, self-esteem and self-motivation over time, and that there are significant positive relationships between attainment and self-esteem, attainment and self-motivation and self-esteem and motivation. Further, attitudes become more negative which may in the long term impact on pupils' attainment, self-esteem and self-motivation.

5.8.1.1 Implications for teachers

The use of levelled attainment targets to demonstrate pupil progress and achievement is a national requirement. However, whilst attainment is reflected in the awarding of levels of attainment as defined within National Curriculum documentation, there is a need for teachers to ensure that pupils are achieving to the highest level of which they are capable. Further, teachers need to remain vigilant to the impact of attainment on the self-esteem and self-motivation of pupils.

Ntoumanis (2001) argues "those [pupils] with prior experiences who feel and are physically competent are more likely to find PE interesting and fun ..... those who perceive that they lack physical competence usually find the PE experience meaningless, and engage in it only because it is the rule or because of fear of punishment" (pp.236 – 237). Thus if high self-esteem and self-motivation are linked to attainment and teachers plan deliberately to enhance self-esteem and self-motivation, this is likely to result in increased attainment amongst pupils. This may include practices which encourage pupils to gauge their attainment / performance against specific criterion and / or their own previous attainment rather than against the attainment of others, thereby focusing on criterion referenced and ipsative

assessment. By reducing the evaluations made by pupils against fellow pupils, the negative affect of such comparisons could be reduced. Although teachers are already likely to use appropriate teaching strategies, it may help to reinforce the positive effects of the promotion of a task-orientated environment where "ability is demonstrated when task learning and mastery are achieved and high effort is exerted" (Parish & Treasure, 2003, p.174).

5.8.2 Gender

Boys had significantly higher attainment than girls. It has been that suggested differences in attainment between boys and girls are due, at least in part, to the physical education curriculum itself (Parish & Treasure, 2003; Rich 2003). Whilst analysis of curriculum information provided by the schools shows coverage across the range of the National Curriculum areas of activity in secondary schools and to a lesser degree in primary school, the balance of time between the different areas of activity was not likely to be even. Current literature (OFSTED, 2004a; 2004b) shows a disproportionate allocation of time to games activities within schools. Games are traditionally seen as masculine in their orientation (Coakley, 1998; Flintoff & Scraton, 2005; Rich, 2003). Thus, it is possible to suggest that physical education in its present form may be biased towards boys. This in turn may, at least partially, be one reason for higher attainment amongst boys

Rich (2003) identifies physical education and sport as "hegemonic competitive masculinity featuring white middle class practices" (p. 46). She suggests that the 'cult of masculinity' surrounding physical activity is a social reproduction of the gender differences evident within society as a whole and not exclusive to physical education. Further, teachers and curriculum content perpetuate such inequalities through the activities taught. She concludes "These differences marginalize and exclude particular identities and corporeal actions, often with far reaching negative consequences, and can be seen to contribute to the decline in physical participation by girls during adolescence" (p.46). Such a premise builds upon the findings of the Institute of Youth Sport [IYS] (2000) who concluded, "Physical education in its traditional forms may actually contribute to de-motivating girls" (p.49).

Results from this current study showed whilst there were increases in self-motivation in boys and girls, boys had significantly higher self-motivation than girls

at the end of year 7 and the beginning of year 8. The lower self-motivation amongst girls would appear to support previous research that has identified differences in motivation between boys and girls. This previous research (Parish & Treasure, 2003; Shropshire et al., 1997) identifies a link between motivation and the activity undertaken. Parish and Treasure (2003) found that if the activity was associated with a masculine orientation, there was a resultant decline in motivation and participation amongst girls. Associated with this are the differences found in self-esteem between boys and girls. Throughout the study, boys showed significantly higher self-esteem than girls. Such results reinforce previous findings (Eccles et al., 1989; Wigfield et al., 1991). Whilst research comparisons are limited between self-esteem in boys and girls specifically in physical education, it can be suggested that within a physical education environment boys feel more positive about themselves. However, whilst environmental changes (Hirsch & Rapkin 1986) may be one cause of such differences, physiological changes, for example, the onset of puberty at an earlier age amongst girls may also be a contributory factor.

Further, Shropshire et al. (1997) showed the adoption of negative attitudes towards physical education amongst girls as a result of the domination of team games in the curriculum. Support for attitudinal changes as a result of curriculum content issues can be found in the questionnaire and interview data collected from pupils. Whilst curriculum content data provided by the schools showed coverage of the requirements of the National Curriculum for physical education, the time allocated to each area of activity was not identified. However, curriculum content, as reflected in the activities experienced by pupils, was the aspect of physical education girls most liked, for example, the difference sports they experienced, thus inferring a positive attitude towards these activities. However, it was also identified as the aspect they most disliked, for example, cross country, and what they would most like to change, for example in choosing the activities they could participate in, suggesting a degree of dissatisfaction towards some of the activities taught within the curriculum. Thus it may be that the curriculum, or more specifically some of the activities taught within the curriculum, is impacting on girls, resulting in lower attainment, self-esteem, self-motivation and more negative attitudes.

Whilst the activities offered, as both curricular and extra-curricular subject, are likely to be a contributory factor to gender differences in terms of attainment, self-esteem, self-motivation and attitudes, other factors may also be contributing.

Girls identified teaching approaches as an issue that concerned them, more specifically whether activities were taught as single or mixed sex, with some girls preferring mixed lessons as they felt that these were more challenging. This contrasted with boys who showed a preference towards single sexed teaching. Thus the way in which activities are taught may also impact upon on attainment, self-esteem, self-motivation and attitudes.

5.8.2.1 Implications for teachers

There are a number of implications for teachers as a result of this study in relation to gender. Whilst the issues identified are not new, there may be a need by teachers to ensure that they continue to bear these issues in mind. For example, it might be that teachers need to reconsider carefully the activities being taught in order that they reflect the diverse needs of pupils and in particular girls. By looking carefully at the activities undertaken, self-esteem and self-motivation can be enhanced, and associated with this would be increases in attainment. Ongoing consideration also needs to be given to the teaching approaches and methods adopted by staff, for example whether activities should be taught as single or mixed sex lessons, in order that pupils feel secure within the environment in which they work, and are therefore able to perform to the best of their ability.

5.8.3 Age of transfer

Significant differences in attainment, self-esteem and self-motivation were evident between those pupils who changed schools at the end of year 6 compared with pupils who changed school at the end of year 7. At the beginning of year 7 pupils who changed school at age 11 (end of year 6) showed significantly lower attainment than pupils who changed school at age 12 (end of year 7). However, at the beginning of year 8, pupils who changed school at age 11 (end of year 6) showed significantly higher attainment than pupils who changed school at age 12 (end of year 7). At the beginning of year 7, pupils who changed school at age 11 (end of year 6) showed significantly higher self-esteem than pupils who changed school at age 12 (end of year 7). At the beginning and end of year 7, and the beginning of year 8 pupils who changed school at age 11 (end of year 6) showed significant higher self-motivation than pupils who changed school at the age 12 (the end of year 7). It would

therefore appear that a change of school, or a change in year, impact on attainment, self-esteem and self-motivation.

Although there was an overall increase in attainment between the end of year 6 and the beginning of year 8, results showed overall declines in attainment between the end of year 6 and the beginning of year 7. During this period pupils from schools A1 and C4 changed school, with pupils from school B3 remaining within the same school. Thus whilst all pupils experienced a change in school year, pupils in schools A1 and C4 also experienced a change in school. Declines in attainment were also evident between the end of year 7 and the beginning of year 8. Such changes coincided with a change of school being experienced by pupils attending school B3.

There were significant declines in attainment immediately post transfer both in pupils who changed school at the end of year 6 and those pupils who changed school at the end of year 7. Results for those pupils who changed school at the end of year 6, suggest that the declines are only temporary, with increases evident during the first year within the secondary school. However a limitation of the study is the lack of attainment data for pupils who changed school at the end of year 7, where only attainment immediately post transfer were collected. Thus it is not possible to predict if there was a similar pattern of increased attainment.

Such findings replicate previous research (Doyle & Herrington, 1998; Galton et al., 1999; Lenga & Ogden, 2000; QCA, 2000; OFSTED, 2002; 1998 Sainsbury et al., 1998; Williams & Howley, 1989), which identified declines in attainment across curriculum subjects immediately following transfer to secondary school. Thus, the impact of transfer between schools seems to apply equally to physical education as it does to other curriculum subjects.

However, whilst results from this study appear to mirror previous research, it is less clear why there was a decrease in attainment immediately post-transfer. Previous research (Ellis, 1999; Galton et al., 1999; Lance, 1994; Wigfield et al., 1991) has identified a number of reasons for lower attainment post transfer. Ellis (1999) suggested the loss of momentum was due to a 'fresh start' approach being adopted in the secondary school whereby the prior learning of pupils was not necessarily referred to post transfer, with staff in the secondary school preferring to make their own judgements. Such a premise supports previous research (Lance, 1994; Simpson & Goulder, 1998; Stillman & Maychell, 1984), which found a fresh start approach was adopted in the secondary school. Parallels can therefore be drawn

between previous research conducted across subject areas and the findings of this current study.

Results of questionnaires completed by primary teachers and interviews with secondary teachers suggested that secondary teachers disregard, do not make effective use of, or do not receive information regarding physical education from primary schools. Primary school teachers identified that assessment data was provided to secondary schools predominantly for the core subjects of English, mathematics and science. However, some schools provided information specific to physical education, although this focussed predominantly on the identification of the more able pupils, for example gifted and talented, those who had special educational needs and those who had represented the school in sporting activities. Thus there may possibly be a lack of information provided by primary school teachers specific to physical education or the use of the information by secondary school staff is not effective. This is highlighted through the acknowledgement by secondary school staff that they run baseline assessments post transfer, resulting, in some cases, in the setting of pupils as a result of ability. This suggests that the quality of the information provided by primary schools may not reflect the perceived requirements of the secondary school, resulting in the secondary schools not having enough relevant information on which to plan subsequent learning experiences.

Associated with this, results from pupils questionnaires and interviews showed that whilst pupils identify a continued enjoyment of physical education they indicate that lessons are not necessary as hard as they thought they would be, and that there is some replication of work they had previously completed. This reinforces the suggestion that on transfer pupils may experience a curriculum that is less challenging than they are capable of (Ellis, 1999; Fouracre, 1993). Vygotsky's theory of development proposes a 'zone of proximal development' in which children must work in order that progress can be achieved. Thus, immediately post transfer, pupils may not be working in this zone of proximal development and this may be related to the initial declines in attainment found within this study. However, during their first year within the secondary school as teachers understanding of pupils ability develops, they can set challenging tasks that enable them to achieve higher attainment.

However, Galton et al. (1999) question whether declines are due to the adoption of a 'fresh start' or whether the loss of momentum is a result of the break

experienced by pupils between the end of the summer term and the beginning of the autumn term (approximately 6 weeks) resulting in a period of relaxation (Lohaus, Elben, Ball & Klien-Hessling, 2004). If this is the case, it is possible to suggest that declines in attainment are a result of relaxation or deskilling due to a sustained period of non-participation and, as such, declines in attainment would be evident between changes of year regardless of whether pupils changed school or not. Results from this study show declines in attainment between the end of year 7 and the beginning of year 8 amongst pupils who changed school at the end of year 6 and would therefore appear to support the research findings of Galton et al. (1999). However results also showed increases in attainment between the end of year 6 and the beginning of year 7, amongst pupils who changed school at the end of year 7, thus questioning this premise. These pupils not only remained in the same school, but also remained with the same class teacher, thereby receiving continuity in both the structures of the school and the teacher. It is therefore feasible to suggest that these pupils did not experience a 'fresh start' approach by the teacher, as the teacher was already aware of their capabilities. Thus teacher expectations were based on previous knowledge, providing opportunity for the promotion of continuity and progression. Further research would need to be undertaken to look at the impact of a long holiday on attainment of pupils who remain in the same school.

One way in which continuity and progression can be promoted and the impact of the transfer from primary school to secondary school lessened is through the exchange of information between the primary and secondary schools. This requires links to be established. There were differences in the links identified between primary and secondary schools. Most schools involved in the study had established some form of link between themselves and either their feeder primary school, or the transfer secondary school. For the majority of schools links had been established to address the social impact of transferring school, for example through pupils from primary / combined schools visiting the secondary school prior to transfer. Where curricular links were established it was within the sports college network where additional finance allowed for time to be allocated, with the promotion of links between schools within the sports college structure an expectation.

Overall, links between schools, although present were not well established for physical education. This is worrying as the primary schools involved in the study

sent the majority of pupils to the secondary schools. Thus it would be anticipated that links between these primary and secondary schools would be better than links with others schools. If this is the situation it raises concerns for those schools where links are less evident, further raising the need for more detailed analysis of the links that are established between schools in respect of physical education.

Thus, findings of this current study suggest a focus of links between primary and secondary schools towards the promotion of social / pastoral continuity. Research (Derricott, 1987; Galton et al., 1999; Galton et al., 2003) highlight the need to promote both curriculum and social / pastoral continuity between schools. However previous research (Derricott, 1987; Galton et al., 1999; Galton et al., 2003) highlights that personal and social continuity has received greater attention and promotion than curriculum continuity, further highlighting a need to encourage the promotion of curricular continuity between phases of education.

Significant differences in self-esteem were found between pupils who changed school at the end of year 6 when compared to pupils who changed school at the end of year 7. This significant difference was most evident at the beginning of year 7 with pupils who changed school at the end of year 6 showing significantly higher self-esteem than pupils who remained in the same school. Previous research (Hirsch & Rapkin, 1986; McCarthy & Hoge, 1982; Wigfield et al., 1991) found increases in self-esteem post transfer, whilst other research (Eccles et al., 1989) found decreases in self-esteem. As such the findings of this research in identifying that transfer acts positively on self-esteem in physical education, adds further to debate regarding the impact of transfer on self-esteem. However, whilst it is not explicit why such changes occur it could be suggested that self-esteem may be raised initially as pupils are new to each other and as such there is a lack of knowledge of each others ability, resulting in a lack of information on which to base comparisons.

Pupils who changed school at the end of year 6 had significantly higher self-motivation than pupils who changed school at the end of year 7. Results suggest that a change of school has a positive influence on self-motivation. Such a premise is further supported by the increased self-motivation in pupils who changed school at the end of year 7, at the beginning of year 8.

Pupils who changed school at the end of year 6 attended schools A1 and C4. Results showed that there was no significant difference in self-motivation between pupils who attended these 2 schools. However pupils in schools A1 and C4 showed

significantly higher self-motivation than pupils who attended school B3. Previous research (Galton et al., 1999; Lenga & Ogden, 2000; Seidman et al., 1994) showed that motivation declined post transfer, however other research (Galton et al., 2000; Huggins & Knight, 1997) showed increased motivation post transfer. Bouffard and Couture (2003) suggested that motivation varies across subject areas. Specifically they stated that motivation "is built out of individual learning activities and experiences and that varies from one situation or context to another" (p.19). Thus, results of this research suggest that physical education in the secondary school has a more positive impact on self-motivation development than in primary schools. This may be a result of changes in the way physical education is taught, the activities and contexts in which pupils' work, or facilities and equipment provision. However, it may be that the change of school itself is a motivating factor, for example new teachers, better facilities, increases in the activities taught.

As has previously been identified, the findings of this current study suggest a focus by those school involved towards the promotion of social / pastoral links in general. Thus to some extent the positive increases in levels of self-esteem and self-motivation post transfer would appear to suggest that mechanisms in place, in particular the practices implemented in respect of liaison and transfer arrangement, are acting to improve the socio-pastoral transition of pupils between schools. However, more recent research (Lohaus et al., 2004), identified that transfer between schools may not be as stressful as previously identified, and that the extended summer break is positive in providing a period of relaxation for pupils. What therefore emerges is that whilst the summer break may impact negatively on attainment, it may equally have a positive impact on self-esteem and self-motivation.

Further, these results (attainment, self-esteem and self-motivation) suggest that a later transfer from primary to secondary school may actually be detrimental to performance in pupils. At the beginning of year 8, pupils who changed school at the end of year 7 showed lower attainment, self-esteem and self-motivation when compared to pupils who transfer at an earlier age. However, what remains unclear is whether over time pupils who transfer at a later age eventually achieve the same attainment as pupils who transfer earlier. Historically there has been, and still is a difference in education provision between primary and secondary schools (Maclure, 1979). There is a focus in primary schools towards a pupil centred approach to teaching using class teachers to provide instruction across subject areas. This

contrasts to the secondary school subject centred approach provided by a specialist (see for example, Gorwood, 1991; Hooper et al., 2000; Lance, 1994). The change in teaching focus between primary and secondary schools may therefore be one reason for the change in attainment, self-esteem, self-motivation and attitudes post transfer.

5.8.3.1 Implications for teachers

Previous research (BEDC, 1975; Galton et al., 2003; ILEA, 1984; CACE, 1967) has identified key practices that can be adopted to support transfer of pupils from primary to secondary school. These include meetings between staff in primary and secondary schools; meetings between staff and pupils; visits to the secondary school by pupils transferring. It would appear that the schools involved in this study are implementing those practices predominantly focused around the promotion of social / pastoral continuity rather than those focussing on curricular continuity and progression. Structures therefore need to be adopted that encourage schools to look to enhance curricular continuity. This may include better information sent from the primary to the secondary school, joint planning of the key stage 2 and key stage 3 curriculum, formalised meetings between secondary schools and their feeder primary schools to discuss curricular issues, or visits between schools to observe practice.

This current research focused on feeder primary schools that sent the majority of pupils to the secondary school. Therefore consideration needs to be given to how secondary schools can strengthen links across their feeder schools, in order that basic information transfer can occur. Further, consideration needs to be given to how these links are monitored to ensure that they are in place and maintained within these schools. However it must be recognised that this is extremely difficult to do due to different practices in different schools, staff changes, time, and priority. Thus it may be necessary within primary and secondary schools to identify specifically the information needed within physical education to ensure continuity and progression in learning. Such information may relate to the activities taught, the attainment achieved by pupils and any particular strengths or weaknesses. Evolving from this would be a transfer form similar to that for the core subjects of English, mathematics and science (see Appendix B).

If declines in attainment immediately post-transfer, or after a summer break, are reflective of periods of deskilling as suggested by Galton et al. (1999), the adoption of strategies that lessen this deskilling period also need to occur. In some

LEA's the adoption of a four or five term year is attempting to address this situation. This will provide interesting research findings in the course of time. However schools need to think of strategies other than term changes to address the situation. Examples may include the organisation of summer schools, although the voluntary basis of such courses is likely to mean that they will not be widely available or attended. However acknowledgement should be made to the research of Lohaus et al. (2004) who identify that extended breaks may be beneficial for pupils due to the relaxation they experience.

Theories / models of development focus on stage theory – with children having to pass through one stage to reach the next. These theories emphasise the need to build upon prior knowledge for further development to be achieved. This is reflected in the National Curriculum, which is designed to promote continuity and progression. The movement from primary to secondary school for many pupils coincides with the curricular transition from key stage 2 to key stage 3, thereby coinciding with changes in curriculum requirements. It may be necessary for staff to be made more aware through training and continuing professional development of principles of child development and how this is linked in to the progressive nature of the curriculum taught between key stage 2 and key stage 3. This would allow for a greater understanding of the relationships between cognitive, affective and motor development. Knowledge and understanding of such concepts would allow teachers to look more closely at the content of their curriculum in order that the needs of those they teach is addressed more effectively.

5.8.4 Developing a model to reflect changes

What emerges from such results and the discussion thus far, are the existence of complex relationships between self-esteem, self-motivation and attainment. Whilst they were all found to attribute to variance in each other, it would appear that self-esteem is the strongest variable. Analysis conducted as a result of multiple regression analysis showed that between 25% and 29% of the variance in self-esteem could be attributed to self-motivation and attainment. Further, that there is stability in the attribution these variables make across time periods. Whilst similar analysis showed that self-esteem and attainment attributed to variance in self-motivation and self-esteem and self-motivation attributed to variance in attainment, both contributed a lesser amount.

Such results are not unexpected. Previous research (Bachman & O'Malley, 1977; Burns & Steffenhagen, 1987; Chubb et al., 1997; Ireson et al., 1999) suggests that if an individual feels positive about themselves within an environment, in this case physical education, and value themselves within that environment they are more likely to be motivated and also achieve at a higher level. Therefore the results of this current study support previous research findings that show relationships between self-esteem, attainment and self-motivation, with higher self-esteem reflected in high attainment and high self-motivation. Such relationships can be reflected as shown in figure 5.1.

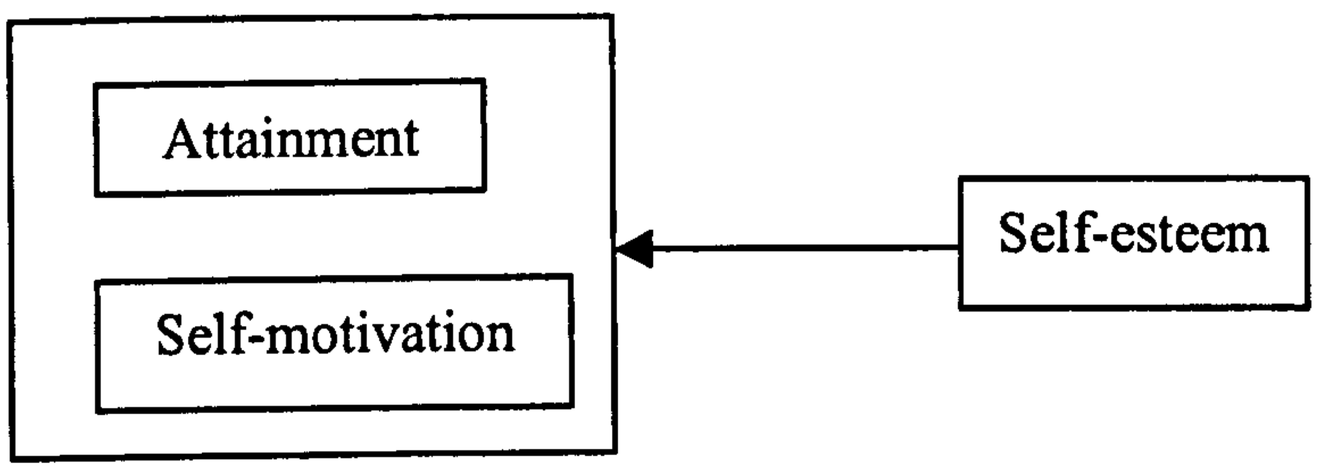

Figure 5.1 Relationships between self-esteem, attainment and self-motivation 1

Gallahue and Ozmun (1994) identify the development of self-esteem as associated with the individual's view of themselves against their achievement (competence), and their view of themselves compared with others. Such a premise supports that of Harter (1983), who identifies the self-system as socially constructed as a result of interaction of with others and the environment. What therefore emerges is the individual's perceptions of themselves within a given situations becomes focal in determining their motivation and attainment.

Previous research (Shen, 2002; Shropshire et al., 1997: Trouillard et al., 2002) also supports the existence of positive relationships between attainment and motivation, suggesting that pupils who have higher attainment are more motivated towards the activity, and that associated with this an individual with higher motivation is likely to achieve to a higher level. Thus in looking at raising self-esteem, the perceived changes that might occur may strengthen the relationships between self-motivation and attainment. These can be seen in figure. 5.2

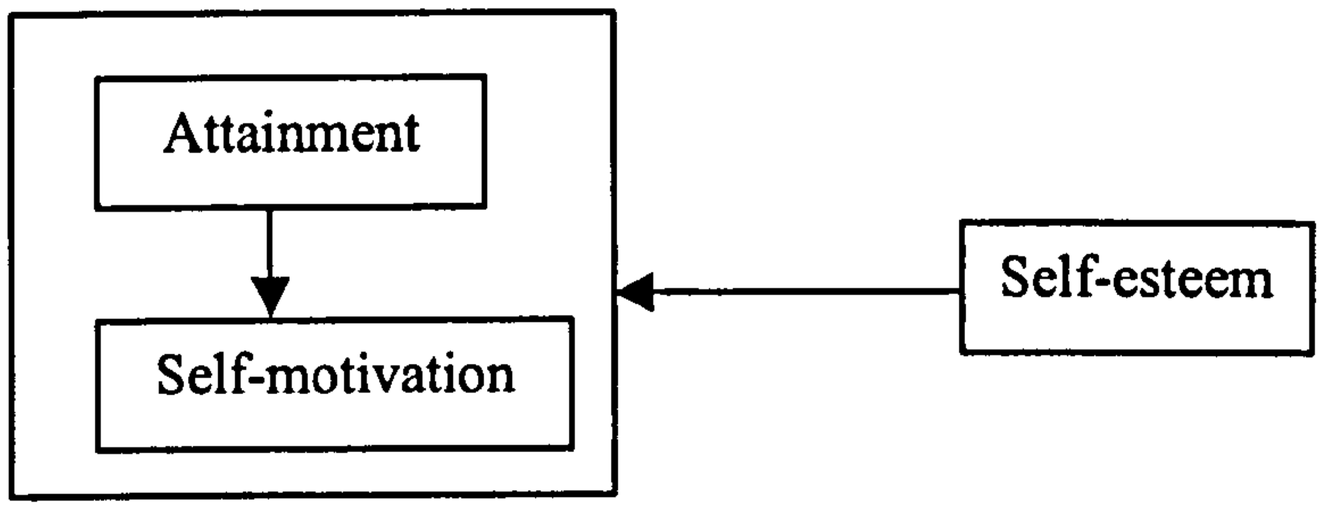

Figure 5.2 Relationships between self-esteem, attainment and self-motivation 2

If focusing on self-esteem does impact on attainment and self-motivation, there is a need to include in any model factors that may impact on self-esteem. Research (Fox, 1988a) suggests that self-esteem is developed as a result of judgements made by the individual when compared against other, and is based on previous experiences and achievements. Thus in adopting strategies to promote self-esteem reference to previous experiences need to be made and comparisons against others limited. One example may be to identify pupils' prior learning to ensure that the planned learning episode builds upon this prior learning, thereby promoting continuity and progression between learning episodes.

A second example would to be to look at what pupils are assessed on. For example is attainment a reflection of individual performance when compared with themselves or a reflection of performance against others. If attainment is a reflection of achievement against others it can be argued that it encourages social comparison that may be detrimental to self-esteem development. Thus attainment should be focussed towards individual development rather than assessment against others, thereby reducing the frequency of social comparison, which has been shown to impact on self-esteem development. In doing so there would need to be a move from a competence based model to an improvement-focused model, which would allow pupils to review progress against their own targets. This would impact upon the pedagogical approaches adopted by teachers within physical education for example how activities are deliver to reflect individual needs and how assessment is conducted. This can be reflected in figure 5.3.

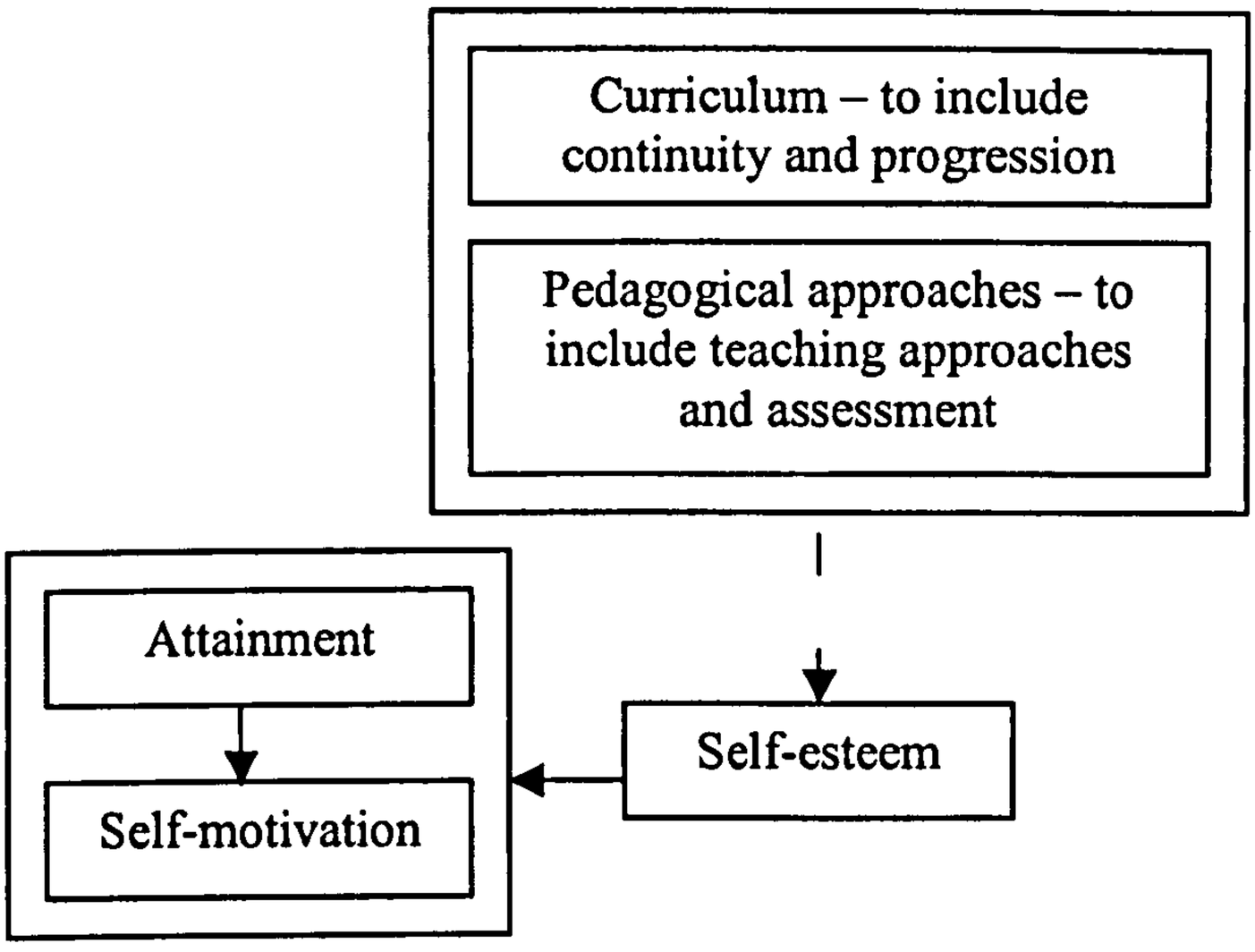

Figure 5.3 Potential influences of self-esteem and how these may impact on self-motivation and attainment

Whilst the development of knowledge and understanding of curriculum and pedagogical approaches may be consistent within schools, what is less evident is its consistency between schools, particularly during transfer. The socially constructed nature of the self-system as proposed by Harter (1983), suggests that its susceptibility to change is most pronounced when social change occurs. In the context of this study such change occurred during the transfer from primary to secondary school. The findings therefore build upon previous research regarding changes to attainment, self-esteem and self-motivation. Of interest however is the reasons identified by Eccles and Midgley (1989) for the occurrence of such changes, in particular the premise that pedagogic changes, to include assessments and teaching strategies, are key contributors.

It was evident that post transfer pupils in this current study experienced changed pedagogical approaches, with for example curriculum subjects being taught by subject specialists rather than by the same class teacher. Further, the majority of lessons were taught to single sex groups. Pupil responses indicated a preference towards the adoption of such an approach with 46% of boys and 60% of girls preferring to be taught as single sexed groups. Reasons for such a preference were given as social comparisons – for example not wanting to perform in front of the other sex, maturity factors – for example boys being more immature and disruptive than girls; and friendship factors – for example not wanting to be split up from their friends. However, it should also be acknowledged that some girls showed a

preference towards mixed sex groups as they felt that they were challenged to a higher level within them. Such factors can be categorised as factors relating to the affective development of the individual, which will impact on the development of positive self-esteem. Thus in looking to raise self-esteem, particularly during transfer, there is a need to continue to adopt the pastoral based liaison activities, for example visits to the school, currently evident within schools, as well as looking to enhance curriculum and pedagogical approaches.

What is less evident from the results of this study is how self-esteem, self-motivation and attainment impact on pupils attitudes towards physical education. Previous research (Digelidis et al., 2003; Fox & Biddle, 1988b) identifies attitudes as learned behaviours which can be used to predict future behaviours. Fox and Biddle's (1988b) model of attitude construction identifies three domains in which attitudes are rooted, these being the affective, behavioural and cognitive. From the domains identified by Harter (1983) and Seidman et al. (1994) as constituting the self-system, similarities are evident between the affective (self-esteem), behavioural (attainment) and cognitive (motivation) domains of the self-system and the constituents of attitudinal construction. Further research therefore needs to be conducted to look at whether by raising self-esteem attitudes towards physical education become more positive. This therefore needs to be reflected in the emerging model (see figure 5.4).

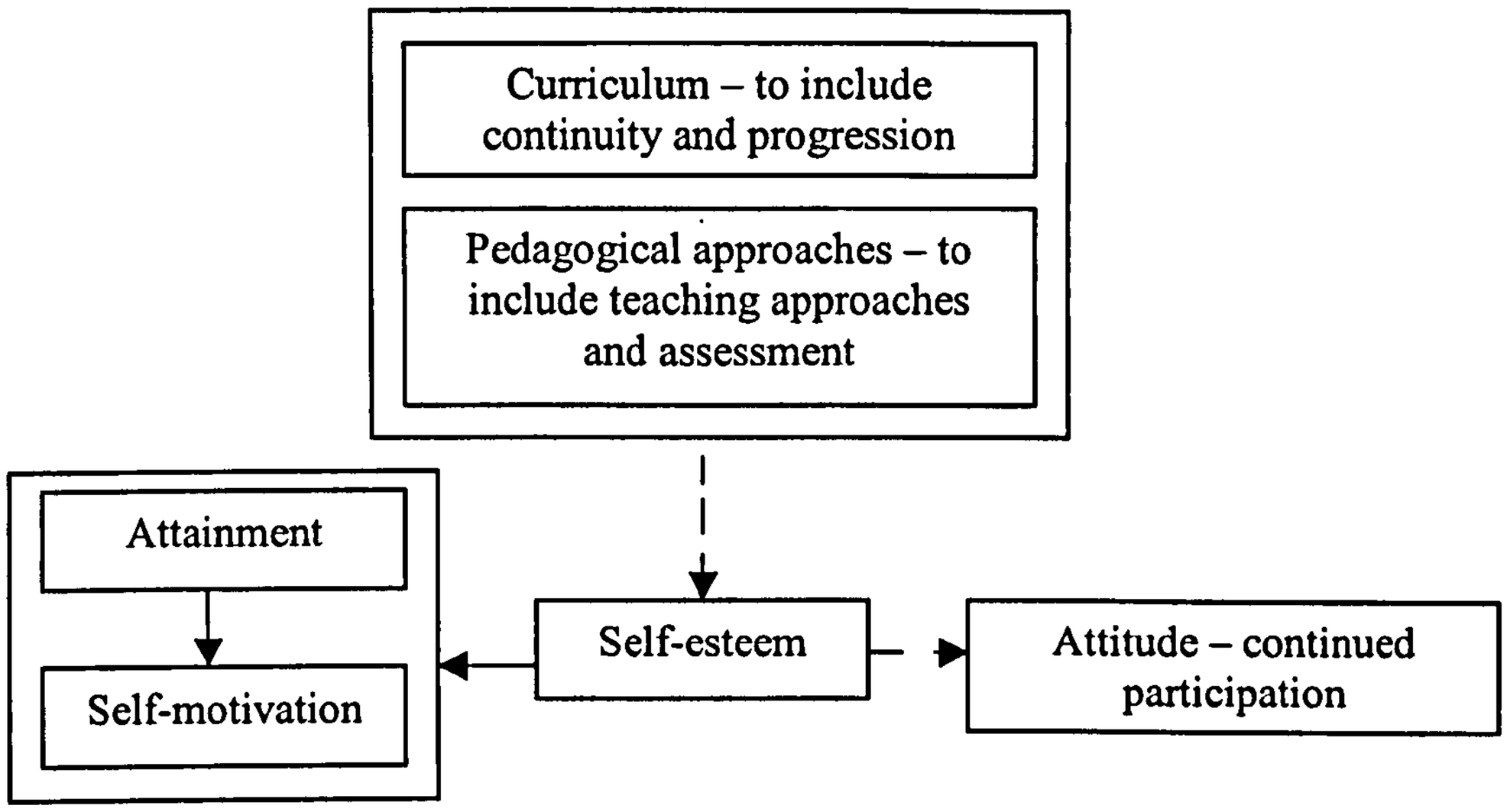

Figure 5.4 A tentative model to explore the relationships between self-esteem, attainment, self-motivation and attitudes and how curriculum and pedagogical approaches may act as influencing factors

The physical education experience both in the primary and secondary school has an impact on pupils across the across the cognitive, affective and motor domains of development. Changes in curriculum provision and pedagogical approaches impact upon the individual in terms of their self-esteem, self-motivation and attainment. The extent to which such changes occur impact on the attitudes pupils demonstrate towards physical education. Emerging from this study therefore are complex relationships that warrant more in depth research, particularly in respect of looking at whether the tentative model proposed can be applied within the school environment.

5.8.4.1 Implications for teachers

The proposed tentative model highlights a number of implications for teachers within the school environment. If the focus becomes the enhancement of self-esteem, then strategies need to be employed which promote such enhancement.

Researchers (Gallahue & Ozmun, 1995, Marsh, 1993) identify self-esteem as a reflection of the individual's perceived competence based upon comparisons with themselves or against others. Such comparisons they argue can be linked to their development within the physical, cognitive and emotional domains. Erikon's theory of social development reflects this further, identifying the detrimental impact social comparisons can have on the self-esteem of individuals. Thus there becomes a need

to support self-esteem development, especially within a curriculum area that implicitly promotes comparison in terms of pupils' physicality, i.e requires pupils to at times compare themselves against other based upon their physical competence.

One implication is therefore to look at how social comparisons are made and strategies that can be employed that reduce the reliance on these. The National Curriculum for Physical Education highlights a need for pupils to evaluate their own and others performances. By it nature the later encourages social comparison. But it is the way in which such comparisons are made that will ultimately impact upon individual's self-esteem. Practices now within schools look to promote small group comparisons, with pupils comparing themselves against a partner or a limited number of pupils rather than in front of the whole class. This reflects the adoption of more pupil centred approaches to teaching where the focus is towards pupils individual learning.

The adoption of a focus to more independent learning has the potential to raise the value pupils assign to the subject as they are more actively involved in the learning process (Alves-Martin et al., 2002). What therefore becomes evident is that there is a need for teachers to review the teaching strategies they employ based on their understanding of the impact of different strategies on the developing child. Teaching strategies that could be utilised to increase self-esteem include; reciprocal whereby pupils work together and assessment is based against individualised criteria; self-check where pupils assess progress themselves against set criteria; inclusion where activities are differentiated to reflect the individual needs of pupils and guided discovery where pupils are guided via a number of tasks to achieving the lessons intended learning outcomes.

If the value assigned to the activity reflects the individual's self-esteem, there is also a need to look at the curriculum pupils are taught. The National Curriculum for physical education promotes the adoption of a broad and balanced curriculum. However emphasis within the curriculum taught within schools is towards games activities as shown by in the data obtained from the schools in this study. It can therefore be argued that the current curriculum received by pupils may not reflect their interest within physical education.

Implicit throughout the issues raised is a need for learning episodes to build on previous experiences of individuals in order that learning is progressive and demonstrates continuity, and provides pupils with activities that challenge them.

Such a premise reflects the theories of development proposed by Piaget, Vygotsky and Bruner. Teachers need to continue to liaise with other teachers, be it in the same school or across schools, so that they have a better understanding of what pupils have experienced, allowing them to develop appropriate learning episodes to develop these.

5.8.5 Overall implications

Throughout the discussion the implications of the results of this study have been identified, specifically in respect of the implications to staff. This sections looks to provide an overview of these implications both in respect of teachers of physical education as well as towards current policy.

5.8.5.1 Overall implications for teachers

Although there is much good practice and awareness by many teachers of the issues involved in the transfer of pupils from primary to secondary school in physical education, due to limited time for discussion between primary and secondary school staff, staffing changes, the number of feeder schools from which the secondary school receives pupils and differing priorities within schools, these issues may not be given the attention they require.

If self-esteem is the most important factor, there becomes a need to look at the curriculum taught and the pedagogical approaches used in order that self-esteem is enhanced through the focus of learning towards the individual needs of pupils. This may be through a reduction in the level of social comparison undertaken, so that pupils perform in front of smaller groups, and an increased focus towards pupils looking at achievement against their own previous achievement in order that they feel more confident about themselves and reduce the need to compare themselves against their peers. Further, there is a need to raise the interest pupils have towards physical education so that they value the subject more, and therefore demonstrate more positive attitudes. In focusing towards to pupils individual learning needs there becomes a need to differentiate activities to reflect diversity.

Information regarding these issues needs to be provided to teaching staff either through Initial Teacher Education (ITE) or through continuing professional development (CPD), to improve knowledge in general across key stages.

Current provision in primary and combined schools for physical education predominantly requires the class teacher to teach physical education lessons. For some primary teachers the training they receive in the subject is limited. OFSTED (1998) identified that initial teacher training in physical education on primary courses averaged only 23 hours for those on a post graduate course, and 32 hours for those following an undergraduate route. Thus within ITE, there may be a need to increase the time allocated to physical education. For those already qualified, there may be a need to provide reinforcement through CPD. However, what should be acknowledged is that due to the time spent with their pupils, primary school teachers are likely to have a greater understanding of each pupil's individual needs. Further, primary school teachers already use a range of child-centred approaches to learning. Therefore there may be a need to encourage teachers to transfer the strategies they already employ within their classroom setting to the physical education setting, thereby raising teacher's confidence in their own ability to deliver physical education.

Whilst there is a need to look at enhancing and developing current practices, there is also a need to acknowledge what is currently in place during the transfer between primary and secondary schools. The development of social / pastoral links need to be maintained and in some cases strengthened so that pupils settle into their new school as quickly and as effectively as possible. Within this, consideration must be given to subject specific as well as more generic issues, and in physical education may include for example information about specific kit requirements or expectations of staff.

The development of curriculum continuity needs to be enhanced so that previous work is built upon rather than pupils repeating what they have already done in their primary schools, or not being provided with work that challenges them sufficiently. The nature of the National Curriculum for physical education is such that the areas of activities taught each year may be the same likewise the specific activities may also be replicated. For example, games activities are an area of activity that may be taught each year, further within this area of activity Hockey for example, may also be taught each year. Thus, teachers may teach the same activity each year but may not specifically differentiate between the content that they are going to teach each year, or pupils needs in different years. This is different to other curriculum areas that have more detailed prescriptive content, particularly in relation to one

aspect of the curriculum being taught before another. Consequently there is likely to be some natural repetition within physical education. What is important for teachers to be aware of and plan for is the extent to which this repetition builds upon prior knowledge, thus reflecting the spiral curriculum evident with the work of Bruner. To increase the likelihood of spiralling curriculum occurring, there is a need for effective liaison to be developed between schools and within schools themselves to avoid unnecessary repetition. However, this may be difficult due to the need to liaise with a number of feeder schools. Associated with this may be a lack of time to make this process effective.

The primary focus during transfer must be towards the needs of the individual, both social and academically. Whilst it is acknowledged that there is a need to promote continuity and progression during transfer (Derricott, 1987; Galton et al., 1999; Youngman, 1980), it must also be acknowledged that there is a place for discontinuity (Derricott, 1987; Galton et al., 2003; Measor & Wood, 1984; Williams & Howley, 1989;). Discontinuity, for example in the adoption of different teaching methods and strategies reflective of the developmental needs of pupils, is important during the transfer from primary to secondary school. What is important is that such discontinuity is planned, and that the use of teaching methods and strategies continue to challenge pupils, for example, in the movement away from a generic approach to games to teaching adult versions of the activity and the teaching of more advanced skills and tactics. Where discontinuity is apparent teachers must also ensure that self-esteem, self-motivation and attitudes remain positive through consideration of the activities taught and the way in which they are presented in order that they effectively meet and reflect the needs of pupils' as they get older.

5.8.5.2 Implications for policy

The models of motor development identify a progressive process by which skills are acquired, developed and applied within changing contexts. Whilst to some extent these theories are reflected in the key stages outlined in the National Curriculum for Physical Education, the focus within documentation is towards activities rather than towards generic skills. Thus there may be a need to review documentation, in terms of detail provided regarding what constitutes fundamental skills. This may require, in particular during key stage 1, physical education to be taught as a holistic subject, rather than in the compartmentalised approach currently

undertaken. Therefore pupils are taught the fundamental motor skills for example rolling, jumping, throwing, and catching rather than gymnastics, dance and games. If this is achieved, and pupils are able to develop their basic movement competencies, this should impact positively on their self-esteem when more specific activity related skills are taught, as they will feel competent and confident to become actively involved.

Another implication for current policy is to look at the assessment of pupils within physical education. Current governmental policy is towards the promotion of a competence model, whereby achievement is reflected through attainment against predetermined criteria (levels of attainment). Whilst such practice may be beneficial particularly for those pupils who are very competent or motivated by success, for those who are less able the impact may be more negative as their lack of ability will be demonstrated to the rest of the class. Consideration may therefore be necessary, to look at whether an improvement model may also be effective. Such an improvement model would be based on the improvement made by pupils either during a lesson or during an activity. Therefore, pupils are not only assessed against national standards, but are able to be assessed against themselves, thereby promoting more individualised learning.

5.9 Limitations of the study

Whilst interesting results have been obtained as a result of this study, limitations to the extent to which generalisations can be made need to be acknowledged. Such limitations can be identified as subject mortality, measurement effect and elements of the data collection techniques used.

Cohen et al. (2000) identify disadvantages of longitudinal studies as time consuming, expensive, suffer from subject mortality and that they can be influenced by measurement effects. This present study appears to be no exception. Subject mortality is a natural occurrence, particularly within longitudinal studies. Reasons for such mortality within this study were a results of a number of pupils not being present at all four collection dates as well as pupils who had left the school, or pupils who did not transfer to the secondary school anticipated. Such situations were out of the control of the researcher, and resulted in the need to drop one of the schools from the sample due to the small number of pupils involved.

Associated with such a decline in participants was that the nature of the study resulted in multiple variables being collected (attainment, self-esteem, self-

motivation and attitudes), and consequently there was an increased chance of experiencing subject mortality as where comparisons across variables were necessary (in the case of longitudinal data) all variables needed to be present. For example for analysis to be conducted on changes to individual pupils self-esteem between the end of year 6 and the beginning of year 8, pupils needed to complete the questionnaire on all four occasions. Further, comparisons across time meant that for pupils to be involved throughout the study they would potentially need 16 separate pieces of data (4 collected at each data collection point). However such subject mortality impacted on the amount of longitudinal analysis that could be conducted rather than on the cross-sectional analysis that was conducted.

Those situations which were more under the control of the researcher were issues regarding incomplete questionnaires, where methods were employed during the study to try to reduce such occurrences, for example checking of questionnaires, leaving questionnaires and having them returned by post and multiple visits. However, verbal comments made by pupils to the researcher suggested that some pupils became bored with completing the questionnaire that may have resulted in a measurement effect. Developing upon this, evidence was found from reading completed questionnaires which showed that some pupils had just ticked the same box throughout (for example answering all questions with the same response), with others ticking boxes so they followed a pattern.

There were also limitations in how assessment data was collected. The reporting of levels of attainment is statutory only at the end of key stage 3 (end of year 9), thus primary schools may only have provided data on attainment in response to the request of the researcher, rather than having such data readily available. Further, data collected from staff was reflective of attainment over an extended period of time, and in some cases across a number of areas of activity. This contrasted with the data collected by the researcher, which was based on observation of attainment in only one lesson, and in only one area of activity. This is contrary to how attainment should be judged and this may have biased the results. However, the fact that the researcher's assessment data was used to moderate the data obtained from teachers, was designed to reduce the limitations of this method of collecting data.

In relation to self-esteem, self-motivation and attitudes towards physical education, the questionnaires used required pupils to respond based on their

perceptions of physical education rather than specifically to games activities. It is therefore possible to suggest that the results obtained reflected changes experienced by pupils across physical education as a generic subject rather than specifically in respect of games activities. Thus generalisations can be made across physical education as a subject. However equally it should be acknowledged that questionnaires were administered prior to a physical education lesson where games activities were being taught, and as such it is unclear whether this may have impacted on how pupils responded.

A further limitation is that the results have looked only at group results, and therefore changes for individual pupils' have not been analysed. Thus, attainment, self-esteem, self-motivation and attitudes may have declined for some individuals or increased in contradiction to the group norm. There is therefore a need to consider individual pupils results, as this will allow a greater understanding of how individual pupils experience the movement from primary to secondary school. Associated with this is that attitudinal data was inferred from their responses to certain questions and as such may reflect pupils' perceptions rather than an expression of their specific attitudes. A further limitation is the lack of depth of data pertaining to continuity and progression, which limits the inferences that can be drawn.

The limitations of the data collection do not allow for in depth analysis and in particular for the identification of specific reasons for the findings obtained. For example detail is limited regarding physical education in the schools in the study, in particular in respect of exactly how the curriculum is structured, what is taught, the strategies employed for teaching and other factors, for example kit requirements, changing and showering and pupil groupings.

5.10 Further Research

With any study, areas for further research are identified. The evidence collected both supports and contradicts previous research conducted within the area of transfer between primary and secondary school, and adds to the current dearth of research specifically within physical education. However, it highlights areas requiring further exploration.

Initial consideration needs to be given to conducting replication studies on a larger sample of pupils and of schools, in order that results from this study can be compared to a wider population. This should include a larger number of schools

where pupils transfer at the end of year 7, and also include pupils who may not transfer until the end of year 8.

The length of the longitudinal study should be extended in order that the effects can be viewed over an extended period of time. This would also allow attainment to be assessed over time and across activities, thereby allowing generalizations to be more specific across physical education as a subject, rather than focusing on one specific activity area. Further, data could be collected in relation to the 4 content areas (acquiring and developing, selecting and applying, evaluating and improving, knowledge and understanding of fitness of health), of the National Curriculum for physical education.

By extending the study period attainment could be monitored over a longer period of time to identify whether a delayed transfer to secondary school has any long term impact on attainment, or whether the decreases immediately post transfer are reversed. This would also allow for analysis of attainment between the end of the academic year and the beginning of the new year to be undertaken in order to see if there is a decrease in attainment after any relatively long holiday period. Further, the way in which attainment data is collected could also be modified, for example attainment data could be based purely on attainment provided by the school.In collecting such data, collection points could be less frequent which may reduce the effects of boredom, in particular on the completion of questionnaires, and enhance the quality of the data collected.

A case study of a primary and secondary school would enable a more in depth analysis to be conducted allowing a deeper understanding to be gained of what is happening in each school, for example: the teaching approaches adopted and the reasons behind the selection of these approaches; how the curriculum is structured, composed and changes over time; and how pupil needs are reflected within the curriculum taught. This would allow for the identifications of practices that either promote or limit positive experiences of physical education during movement both between and within schools, allowing for examples of best practice to be identified. Further, case studies could be employed to explore individual differences, and / or reasons for differences between boys and girls in respect of attainment, self-esteem, self-motivation and attitudes as well as providing opportunities to look more closely at how continuity and progression are planned for and promoted and the effect of this on the teaching of pupils and their subsequent learning experience. By conducting

such research, and applying more qualitative research techniques, specific reasons for differences could be explored in greater depth.

What is important is that more research should be conducted into the promotion of continuity and progression and planned discontinuity, during school transfer. This will help to develop amongst the teaching profession an increased understanding of the process involved in continuity and progression, not only in relation to the National Curriculum, but also in respect of the theories and models that underpin development of children. In doing so an increase in understanding would challenge teachers to better use teaching and learning strategies reflective of individual needs. Further, more detailed consideration needs to be given to whether the absence of planned continuity and progression is as detrimental as thought, or whether planned discontinuity is beneficial between phases of education.

Steed and Sudworth (1987) propose that the movement from primary to secondary school is "a major hiatus in the educational journey of most pupils and it takes time for them to adjust to a different set of conditions" (p.25). Whilst increases in self-esteem, self-motivation and more positive attitudes are apparent immediately post transfer, the declines in attainment immediately post transfer may only be a reflection of the readjustment pupils make to the environment, the presence of repetition of work, or a break over the summer holidays. Indeed, the increases evident by the end of the academic year suggest that such declines are temporary. Perhaps there is a need to accept that some decline in attainment will be inevitable as pupils change school and adapt to a changed environment. However, aligned to this is a need to adopt strategies that ensure some degree of continuity and progression as well as challenge, that result, after a period of adjustment, in increases in pupils' attainment so that they reach their maximum potential.

Emerging from the research is a tentative model which identifies self-esteem as pivotal to the self-motivation, attainment and potential attitudes pupil demonstrate towards physical education both within school and during transfer. Research is needed to test the validity of the model. More specifically it focuses further research towards looking at the extent to which raising self-esteem may impact on self-motivation and attainment, and how this may impact on the attitudes pupils demonstrate towards physical education.

5.11 Conclusions

Transfer between schools is a difficult period for some pupils, impacting upon them academically, psychologically and socially. The purpose of this research has been to identify any changes in attainment, self-esteem, self-motivation and attitudes in physical education between the end of year 6 and the beginning of year 8 (during the transfer from primary to secondary school), and to establish the extent to which gender, age at which transfer occurred and school attended attributed to any changes. Consideration has also been given to the promotion of continuity and progression between schools. In doing so it has sought to add to research currently available in educational literature looking at the impact of a change of school on pupils in the subject of physical education.

What emerges is a complicated picture, of inter-related factors. Although increases in attainment, self-esteem and self-motivation occur between the end of year 6 and the beginning of year 8, results suggest that attitudes become less positive over this period. Further differences within these variables occur between boys and girls, age of transfer and the secondary school attended. However, results are not consistent at each data collection point, and changes over time are not consistent. What does however emerge is that self-esteem is a key variable within physical education, and therefore it may be important to focus on this during the delivery of the subject.

Factors such as the natural development of the child cognitively, affectively and in respect of their motor development; continuity and discontinuity; and the need to build upon prior knowledge and understanding progressively impact upon individual pupils. A range of factors must be considered by individual teachers in individual schools, and will result in differences in the strategies employed to address them. There is no universal solution. Each teacher must consider a broad range of factors within the context in which they teach. Too narrow a focus is less likely to be successful due to the inter-relationships that exist.

However, the importance of the transition between primary and secondary phases of education on pupils across curriculum subjects needs to be recognised. For this to be achieved, time must be allocated to the processes involved in planning and managing the transfer of pupils both within and between primary and secondary schools. This would need a change in the level of priority currently given to the

process, specifically in respect of curriculum subjects other than the three core subjects of English, mathematics and science.

The progressive nature of learning requires us as teachers to acknowledge pupils' prior learning and experiences. As a profession there is a need to view the education of pupils as a continuum, which starts when they embark on their first stages of learning, which for many occurs prior to starting school and continues through their compulsory education. Traditionally held beliefs regarding phases of education need to be addressed in order that all teachers acknowledge the prior work of others. Lance (1994) identified "a need to tackle the mistrust and disrespect which exists across the divide between people who, after all, are members of the same profession" (p.46). Priorities need to be given to enhancing the pupil experience. It is no good just adopting a 'fresh start' approach. The effectiveness of the teacher relies on their ability to reflect the needs of their pupils, within the learning experiences they plan and conduct. The development of an awareness of the issues affecting pupils during the transfer both between and within schools can only enhance this learning experience.

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Appendices

Appendix A

Physical Education Attainment Targets

Attainment target

Level 1

Pupils copy, repeat and explore simple skills and actions with basic control and coordination. They start to link these skills and actions in ways that suit the activities. They describe and comment on their own and others' actions. They talk about how to exercise safely, and how their bodies feel during an activity.

Level 2

Pupils explore simple skills. They copy, remember, repeat and explore simple actions with control and coordination. They vary skills, actions and ideas and link these in ways that suit the activities. They begin to show some understanding of simple tactics and basic compositional ideas. They talk about differences between their own and others' performance and suggest improvements. They understand how to exercise safely, and describe how their bodies feel during different activities.

Level 3

Pupils select and use skills, actions and ideas appropriately, applying them with coordination and control. They show that they understand tactics and composition by starting to vary how they respond. They can see how their work is similar to and different from others' work, and use this understanding to improve their own performance. They give reasons why warming up before an activity is important, and why physical activity is good for their health.

Level 4

Pupils link skills, techniques and ideas and apply them accurately and appropriately. Their performance shows precision, control and fluency, and that they understand tactics and composition. They compare and comment on skills, techniques and ideas used in their own and others' work, and use this understanding to improve their performance. They explain and apply basic safety principles in preparing for exercise. They describe what effects exercise has on their bodies, and how it is valuable to their fitness and health.

Level 5

Pupils select and combine their skills, techniques and ideas and apply them accurately and appropriately, consistently showing precision, control and fluency.

When performing, they draw on what they know about strategy, tactics and composition. They analyse and comment on skills and techniques and how these are applied in their own and others' work. They modify and refine skills and techniques to improve their performance. They explain how the body reacts during different types of exercise, and warm up and cool down in ways that suit the activity. They explain why regular, safe exercise is good for their fitness and health.

Level 6

Pupils select and combine skills, techniques and ideas. They apply them in ways that suit the activity, with consistent precision, control and fluency. When planning their own and others' work, and carrying out their own work, they draw on what they know about strategy, tactics and composition in response to changing circumstances, and what they know about their own and others' strengths and weaknesses. They analyse and comment on how skills, techniques and ideas have been used in their own and others' work, and on compositional and other aspects of performance, and suggest ways to improve. They explain how to prepare for, and recover from, the activities. They explain how different types of exercise contribute to their fitness and health and describe how they might get involved in other types of activities and exercise.

Level 7

Pupils select and combine advanced skills, techniques and ideas, adapting them accurately and appropriately to the demands of the activities. They consistently show precision, control, fluency and originality. Drawing on what they know of the principles of advanced tactics and compositional ideas, they apply these in their own and others' work. They modify them in response to changing circumstances and other performers. They analyse and comment on their own and others' work as individuals and team members, showing that they understand how skills, tactics or composition and fitness relate to the quality of the performance. They plan ways to improve their own and others' performance. They explain the principles of practice and training, and apply them effectively. They explain the benefits of regular, planned activity on health and fitness and plan their own appropriate exercise and activity programme.

Level 8

Pupils consistently distinguish and apply advanced skills, techniques and ideas, consistently showing high standards of precision, control, fluency and originality. Drawing on what they know of the principles of advanced tactics or composition,

they apply these principles with proficiency and flair in their own and others' work. They adapt it appropriately in response to changing circumstances and other performers. They evaluate their own and others' work, showing that they understand the impact of skills, strategy and tactics or composition, and fitness on the quality and effectiveness of performance. They plan ways in which their own and others' performance could be improved. They create action plans and ways of monitoring improvement. They use their knowledge of health and fitness to plan and evaluate their own and others' exercise and activity programme.

Exceptional performance

Pupils consistently use advanced skills, techniques and ideas with precision and fluency. Drawing on what they know of the principles of advanced strategies and tactics or composition, they consistently apply these principles with originality, proficiency and flair in their own and others' work. They evaluate their own and others' work, showing that they understand how skills, strategy and tactics or composition, and fitness relate to and affect the quality and originality of performance. They reach judgements independently about how their own and others' performance could be improved, prioritising aspects for further development. They consistently apply appropriate knowledge and understanding of health and fitness in all aspects of their work.

(DfES & QCA, 1999, p.46 – 47)

Appendix B

Transfer form

First names

Surname

UPN:

Name of transferring school

End of Key Stage 2 test information

	Test score	Level	Age-standardised score *(optional)*
English			
Reading			
Writing			
Mathematics			
Written tests A and B			
Mental Arithmetic			
Science			

End of Key Stage 1 assessment information

	Teacher assessment	Test/Task score	Test/Task level	Age-standardised score *(optional)*
Reading				
Writing				
Speaking and Listening				
Spelling				
Mathematics				
Science				

Additional information enclosed? ☐ Yes ☐ No

Completed by

Signed

Date

Name

Position

First names

Surname

UPN: 254

Name of transferring school

End of Key Stage 2 test information

	Test score	Level	Age-standardised score *(optional)*
English			
Reading			
Writing			
Mathematics			
Written tests A and B			
Mental Arithmetic			
Science			

End of Key Stage 1 assessment information

	Teacher assessment	Test/Task score	Test/Task level	Age-standardised score *(optional)*
Reading				
Writing				
Speaking and Listening				
Spelling				
Mathematics				
Science				

Additional information enclosed? ☐ Yes ☐ No

Completed by

Signed

Date

Name

Position

Appendix C

Consent form

Julia Lawrence
Research Student
Department of Sport Sciences
Brunel University
Osterley Campus
Borough Road
Isleworth
TW7 5DU

Dear Parent / Guardian.

I am currently studying for a PhD at Brunel University. My research is looking at pupils' attainment, motivation and self-esteem in year 6, 7 and 8. The collection of data will use three methods. Questionnaires will be used to identify levels of motivation and self-esteem. Video analysis will be used to collect pupils' levels of attainment during their physical education lessons. A number of pupils may also be interviewed, with the contents of the interview being recorded. Your child will be asked to participate in the research during year 6 and may be followed through to years 7 and year 8 within their secondary school in order that data can be collected relating to the impact of transfer from one school to another.

The questionnaires will consist of 9 questions that relate to how your child feels about physical education, and 20 questions that look at your child's level of self-motivation towards physical education. The questionnaires will take a maximum of 15 minutes to fill in. Your child will not have to disclose their name on the questionnaire, but will be asked to identify their gender and the school that they attend.

The videoing of pupils will take place during their timetabled physical education lessons. These videos will then be watched by an independent observer to allow for valid and reliable data to be generated.

The data collected during the research period may at some time be used for publication. All data will be treated confidentially and only seen by the researcher. All pupils and schools will remain anonymous and therefore will not be able to be identified.

Participation in this research is voluntary, and you are free to discontinue your child's participation at any time.

I would be grateful if you could complete the permission slip attached and return it to your child's class teacher, as soon as possible.

Thank you for your assistance with this study. Your child's input is vital to its success, as well as to the physical education profession as a whole.

Yours faithfully

Julia Lawrence
Research Student
Brunel University.

CONSENT FORM

Name of pupil _____ Class _____

Name of school _____

I give permission for my child to take part in the research looking at pupils' levels of attainment, motivation and self-esteem. I have received the following information concerning the study.

1. The study has been explained. I understand the explanation that has been given, and what my child's participation will involve.

2. I understand that my child's participation is completely voluntary.

3. I understand that I am free to discontinue my child' participation in the study at any time.

4. I understand that the results of the study will be treated in strict confidence and that my child will remain anonymous.

Signed _____ Date _____

Appendix D

Observation sheets

Pupils Assessment sheet.
Level 2
/ = working at, + = working beyond, = working below

Pupil / number	Can explore simple skills and copy, remember, repeat and explore simple actions with control and coordination.	Can vary actions and ideas and link these in ways, which suit the activities. Is beginning to show some understanding of simple tactics and basic compositional ideas.	Can talk about differences between their own and others' performance, and can suggest ways to improve their own and others' performance.	Can describe how their body feels during different activities, and understands how to exercise safely.	Overall level
1					
2					
3					
4					
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Pupils Assessment sheet.

Level 3

/ = working at, + = working beyond, = working below

Pupil / number	Can use skills, actions and ideas appropriately	Can select skills, actions and ideas and apply them with co-ordination and control. Shows an understanding of tactics and composition by starting to vary how they respond.	Can see how their work is similar to and different from others' work. Can use this understanding to improve their own performance.	Give reasons why warming up before an activity is important. Can give reasaons why physical activity is good for their health.	Overall level
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Pupil Assessment Sheet Level 4
/ = working at, + = working beyond, _ = working below

Pupil / number	Links skills, techniques and ideas showing precision, control and fluency	Applies skills, techniques and ideas accurately and appropriately. Performance shows and understanding of tactics	Can compare and comment on skills, techniques and ideas used in their own and others' work. Uses this understanding to improve their own performance	Can explain and apply basic safety principles in preparing for exercise. Can describe the effects of exercise on their bodies and how this is valuable to their fitness and health.	Overall level
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36					

Pupils Assessment sheet.
Level 5
/ = working at, + = working beyond, = working below

Pupil / number	Can combine skills, techniques and idea consistently showing precision, control and fluency	Can select and apply their skills, techniques and idea appropriately. Performance draws on what they know about strategy, tactics and composition	Analyse and comment on skills and techniques and how these are applied in their own and others' work. Modify and refine skills and techniques to improve their performance	Warm up and cool down in ways that suit the activity and explain how the body reacts during different types of exercise. Explain why regular safe exercise is good for their fitness and health	level
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Appendix E

Standardised Lesson

Suggested lesson plan for assessment during year 7.

Lesson Objectives:

Demonstrate a warm up to demonstrate basic safety principles in preparing for exercise and be able to describe the effects of exercise on the body.

Demonstrate during practice situations the ability to link skills, techniques and ideas showing precision, control and fluency.

Demonstrate the ability to apply skills, techniques and ideas accurately and appropriately and perform showing an understanding of tactics and composition.

Demonstrate the ability to compare and comment on skills, techniques and ideas used in their own and others' work and use this understanding to improve their own performance.

Warm up:

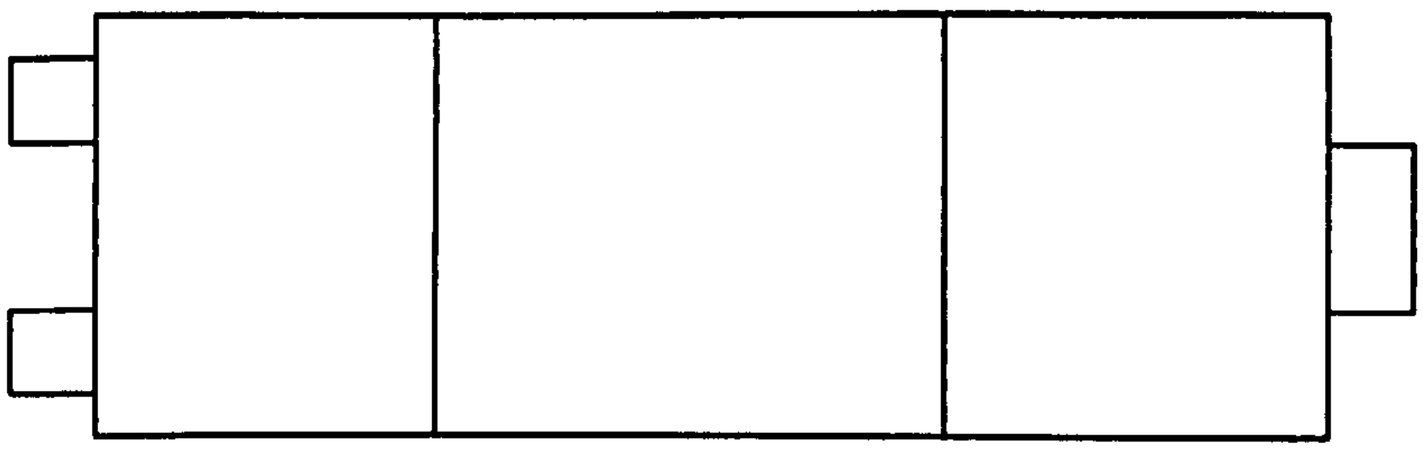
Pupils perform individual or pairs warm up.

Skills:

Pupils perform a series of skills based practices demonstrating progressive practice.

Game:

5 v 4



5 attackers and 4 defenders.
Attackers must maintain possession of the ball and score in the 2 smaller goals.
If the defenders intercept the ball they must get the ball into the attackers goal area.

Evaluation:

Pupils are expected to evaluate their own and others performance.

Appendix F

Self-esteem Questionnaire

Gender: male / female

Reference number ____

Physical Education Specific Self – Esteem Questionnaire.

(Reeves, C. and Cooper, M., 1994)

1. At times in PE and games, do you think you are no good at all?	( ) strongly agree ( ) agree ( ) disagree ( ) strongly disagree
2. In PE and games, are you able to do things as well as most of your friends?	( ) strongly agree ( ) agree ( ) disagree ( ) strongly disagree
3. Are you disappointed with your performance in PE and games?	( ) yes, often ( ) yes, sometimes ( ) no, never
4. How good do you think you are at PE and games?	( ) very good ( ) good ( ) average ( ) below average
5. Do you sometimes feel useless in PE and games lessons?	( ) strongly agree ( ) agree ( ) disagree ( ) strongly disagree
6. In PE and games, do you feel you are as good as most of your friends?	( ) yes ( ) no
7. Do you feel you are not much good at PE and games?	( ) strongly agree ( ) agree ( ) disagree ( ) strongly disagree
8. Are you good at most activities in PE and games?	( ) yes ( ) no
9. In PE and games, do you do most things badly?	( ) strongly agree ( ) agree ( ) disagree ( ) strongly disagree

Appendix G

Self-motivation questionnaire

Gender: male / female Reference number _____

Self Motivation in Physical Education

(adapted from Biddle et al (1996) p.237)

For each statement answer it according how you currently feel about your PE lessons.

No	Item	SA	A	U	D	SD
1	I'm not very good at getting myself to do things.					
2	When I get bored I switch to something else.					
3	I can keep going at things even when they are tiring or painful					
4	If something gets to be too much of an effort to do I am likely to stop doing it.					
5	I'm good at keeping promises that I make to myself.					
6	When I take on something difficult, I try to stick to it until it's finished.					
7	I'm good at making decisions and sticking to them.					
8	I usually try to find the easiest way to do things.					
9	I don't like to work too hard.					
10	I am a lazy person most of the time.					
11	I work harder than most of my friends.					
12	I don't often let myself down.					
13	I like to do things that challenge me.					
14	I change my mind quite easily.					
15	Things don't matter much to me.					
16	I often work until I get tired out.					
17	I never do things I don't feel like doing.					
18	It takes a lot to get me going.					
19	I really want to achieve things.					
20	I don't have much self-discipline.					

Appendix H

Attitudes questionnaires

ATTITUDES 1

Reference number _____

Name	Age
School	Gender
School Transferring from / to	

1. Do you enjoy Physical Education? Yes No

2. Do you look forward to P.E?

Yes No

3. Do you take part in any extra-curricular activities organised by the school?

Yes No

4. Do you participate in any sport outside of school? (e.g. local football club)

Yes No

5. Do you think you are good at Physical Education?

Yes No

6. What are you looking forward to when you change schools in terms of Physical Education?

7. What are you not looking forward to when you change schools in terms of Physical Education ?

8. Please list your 3 favourite subjects with your favourite first.

-
-
-

9. If you had a choice would you do P.E?

Yes No

ATTITUDES 2

Reference number _____

Name	Age
School	Gender

1. Do you enjoy Physical Education? Yes No

2. Do you look forward to P.E?

   Yes No

3. Do you take part in any extra-curricular activities organised by the school?

   Yes No

4. Do you participate in any sport outside of school? (e.g. local football club)

   Yes No

5. Do you think you are good at Physical Education?

   Yes No

6. Have you enjoyed participating in the new activities / sports?

   Yes No

7. Have you enjoyed having more P.E lessons?

   Yes No

8. Have you found the lessons harder than you thought?

   Yes No

9. Have you found that you have repeated work (done the same work this year as you did last year)?

   Yes No

10. Please list your 3 favourite subjects with your favourite first.

11. If you had a choice would you do P.E?

    Yes No

ATTITUDES 3

Reference number _____

Name	Age
School	Gender

1. Do you enjoy Physical Education? Yes No

2. Do you look forward to P.E?
   Yes No

3. Do you take part in any extra-curricular activities organised by the school?
   Yes No

4. Do you participate in any sport outside of school? (e.g. local football club)
   Yes No

5. Do you think you are good at Physical Education?
   Yes No

6. What do you like about PE lessons?

7. What do you dislike about PE lessons?

8. If you could change anything about your P.E lessons what would it be?

9. Please list your 3 favourite subjects with your favourite first.

10. If you had a choice would you do P.E?
    Yes No

ATTITUDES 4

Reference number _____

Name	Age
School	Gender

1. Do you enjoy Physical Education? Yes No

2. Do you look forward to P.E?
   Yes No

3. Do you take part in any extra-curricular activities organised by the school?
   Yes No

4. Do you participate in any sport outside of school? (e.g. local football club)
   Yes No

5. Do you think you are good at Physical Education?
   Yes No

6. What do you like about PE lessons?

7. What do you dislike about PE lessons?

8. Do you ever get bored in PE?
   Yes No

9. Explain your answer to question

10. If you could change anything about your P.E lessons what would it be?

11. Do you prefer mixed or single sexed PE and why?

12. Please list your 3 favourite subjects with your favourite first. (e.g. Maths, English, PE)

13. If you had a choice would you do P.E?
    Yes No

14. What is you favourite activity in PE?

Appendix I

Pupil interviews.

Main questions

A Attitudes to PE

1. Do you enjoy PE? Yes / No.
2. What do you enjoy about PE lessons?
3. What do you dislike about PE lessons?
4. Do you work hard in PE? Why? Why not?
5. Do you always try your best in PE? Why? Why not?
6. Do you find PE challenging or easy?
7. Do you prefer being taught PE in single sexed groups or mixed sexed groups and why?
8. What activities do you prefer and why?
9. Given a choice would you participate in PE and why?
10. What benefits do you get from participating in PE?
11. If you could change PE how would you do it?

B Primary to Secondary

12. What is different between PE at this school and the PE you had in your primary school?
13. Do you do any of the same things in PE as you did in your primary school or do you build on what you learnt at primary school?
14. Do you feel that the way you feel towards PE has changed from Primary to Secondary school? If so how has it changed, and why did it change? If not, why not?
15. What information did you want to know about PE before you came to this school?
16. Did you get any of this information before you came?
17. How did you get this information?
18. If you could write a guide for year 6 about PE in the secondary school, what would you include?
19. Do you think you were prepared for PE in secondary school? Why and how? Why not?
20. How is it different to what you expected?

Appendix J

Staff Questionnaires

Semi-structured interview for staff.

School	Staff member	
Date	Time	Reference

1. What do you understand by the terms continuity and progression.

2. Do you feel that it is important? Please explain.

3. What links do you currently have with your feeder / transfer school?

4. Are you aware of what is taught in your feeder / transfer school?

5. Do you think that there should be agreement between primary and secondary schools over the content of the curriculum taught in primary schools?

6. Do you provide assessment information for your transfer school?

7. Do you think that they find this information useful?

8. Do you know how they use this information?

Appendix K

Staff Interviews

1. Do you currently have any established links between yourselves and your attached primary feeder schools?

    - Yes all go to question 4
    - Yes some
    - No go to question 2

2. Do / did you have links with all your primary schools or only some?

3. Why have you got these links

    - For pupils' benefit – social / pastoral ?
    - *For staff benefit* – curriculum ?
    - Others – sports college ?

4. Have you previously had any established links between yourselves and your attached primary feeder schools?

    - Yes go to question 3
    - No

5. Why have these links terminated?

6. What are these links?

7. How long have you had / did you have these links established?

8. Who initiated these links?

    - primary school
    - secondary school

9. Who is / was responsible for maintaining and developing these links?

10. How have / were these links been maintained and subsequently developed?

11. Why are / were these links maintained?

12. What priorities are / were given for the establishment of your links?

13. How effective are / were your links in relation to

    - Social / pastoral continuity ?
    - Curriculum continuity ?

14. What links do you currently have for the promotion of continuity and progression?

15. Why were these activities specifically chosen?

16. What constraints exist which prevent the establishment of links between yourself and your primary feeder schools?

17. What could you do to overcome these constraints?

18. How do you plan for continuity and progression?

19. What information do you feel you need from your primary schools to promote continuity in a manageable way?

20. What information do you transfer between you and your feeder school in respect of individual pupil and also curriculum content?

- Transfer forms
- School reports
- NC records / Individual assessment sheets specific to physical education
- Knowledge of schemes of work used
- Others

21. Why do you transfer this information?

21. Does the information provided achieve this aim? Do you receive the right information?

22. When do you transfer this information?

- Cross phase liaison meetings
- Open evenings
- School visits

23. When pupils arrive in year 7 is information regarding their ability shared between all members of staff?

24. If so how is this achieved?

25. Do staff take this information on board?

26. What benefits do you see as a result of this?

27. Do you use the information you are given to inform your planning?

28. What other information would you like passed from the school? Do you have a preferred format?

29. What benefits do you derive from the approaches you adopt?

Appendix L

Physical Education within the School

Reference number _____

Name of School	Age range
Transferring schools / feeder schools	
Age of transfer / age pupils received	
Facilities	
PE Co-ordinator	

School	Reference number
Documentation: to include most recent OFSTED report	
Activities Taught	
Schemes of work	
Extra – curricular activities provided	
Number on the school roll	
Facilities:	
Transfer activities: to include those associated with PE as well as those involving visits to schools, or parents evenings etc	