Boys’ perceptions of physical education and physical activity in the eleven-to-thirteen age group

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BOYS' PERCEPTIONS OF PHYSICAL EDUCATION AND PHYSICAL ACTIVITY IN THE ELEVEN TO THIRTEEN AGE GROUP.

by

Melvin Ernest Palmer.

A Thesis submitted in partial fulfilment of the requirement for the award of Master of Philosophy of the Loughborough University of Technology.

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ABSTRACT

The purpose of the study was to investigate boys attitudes towards physical activity and physical education; to identify their likes and dislikes and to examine the influences affecting boys perceptions of physical education; highlighting differences between two academically different ability sets. It became evident that the development of a realistic questionnaire was necessary to collect accurate information from children with relatively low intellect. This resulted in the creation of the "Brainteaser Questionnaire" which became a large area of concern within the thesis. The data were collected over a period of 12 months from 120 boys aged between 11 and 13 years who attended a South Yorkshire Comprehensive School.

A review of the literature had shown that there may be a relationship between pupils' attitudes towards physical education and a number of contributing factors including, the influence of the physical education programme, the P.E. teacher, the pupils self image and their activity patterns.

There is some concern that all children do not develop positive attitudes to exercise through their experience of physical education.

A review of the literature supported the view that exercise is important to the maintenance of good health, and that physical activity should be a lifelong goal of physical education. However, it would seem that many children are not as active as we would think, with activity decreasing with age.

Therefore, it is evident from the study that there was a need for teachers to examine not just "what they teach" but also "how they teach it"! It was also apparent that the teacher had a very important influencing role on the boys' attitudes to physical education with other considerations such as the parents and certain personal and social factors having an effect.

It can be assumed from the results of the study that the majority of boys from both ability sets had favourable attitudes to Physical Education, with many of the boys expressing a desire to continue participating in physical activity as an adult.
Throughout the study the boys stated they enjoyed physical education and felt that it was important to be good at it.

Other factors highlighted by the research were that many pupils wanted more choice in the activities they did, but still enjoyed the "traditional major" games. The boys preferred "not to work with the girls" and indicated that they would prefer more involvement in the planning and organisation of the lesson.

Other influencing factors included less directed lessons by the teacher, more indoor lessons, and a greater opportunity for the boys to work in large groups. The most popular activities expressed by both ability sets were soccer, cross-country, basketball and gymnastics. Least preferred activities were dance and swimming.

The new activities the pupils would like to have had the opportunity to participate in were orienteering, badminton and table tennis.

The study whilst not showing a marked difference between the attitudes of the two ability sets, highlighted the fact that the perceptions of pupils should be considered when planning the Physical Education Curriculum.

No doubt the advent of the National Curriculum for P.E. and the emphasis on assessment of pupils will help to highlight such considerations.
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LIST OF ABBREVIATIONS

P.E.  Physical Education.
P.A.  Physical Activity
B.E.  Body Esteem.
S.E.  Self Esteem.
B.I.  Body Image.
S.I.  Self Image.
C.A.T.P.A.  Children's Attitudes towards Physical activity
C.A.T.P.E.  Children's Attitudes towards Physical Education
CHAPTER ONE
1.0. INTRODUCTION.

It has been stated that a society should be encouraged to develop good attitudes towards exercise, and promote a healthy lifestyle. This view has been reflected in recent years by government initiatives in relation to 'Sport for All' campaigns and the development of healthy lifestyles, which include active participation.

The British Heart Foundation Working Group (Hardman 1991) has acknowledged how :-

"The relative risk of physical inactivity may be greater than commonly accepted and may approach that attributed to smoking, hypertension and hypercholesterolaemia." (1)

Indeed the report declares that:-

"Physical activity is seldom regarded as an important risk factor for coronary heart disease,"

but how:-

"there is now sufficient research evidence to suggest that this view should be reconsidered."
Studies conducted with adults have shown a relationship between regular participation in physical activity and increased longevity. (Paffenbarger, Hyde, Wing & Hsieh, 1986 Blair, Clark, Cureton & Powell, 1989)

According to Powell et al; (1987),

"physically inactive people have almost twice the risk of developing coronary heart disease than those who engage in regular physical activity."(2)

Whilst there has been a wide interest in adult physical activity, surprisingly little is known about children's participation in physical activity or the relationship between physical activity and health (Simons-Morton, O'Hara, Simons-Morton & Parcel, 1987). However, a number of researchers do acknowledge that physical activity has many physiological and possible psychological effects that influence the health of children (Gilliam & MacConie, 1984; Montoye, 1985; Pate & Blair 1978, Shepherd, 1984; Rowland, 1990).

These associations are considered to be particularly important in children because coronary heart disease (CHD) is known to have its origins in childhood (Laver, Conner, Leaverton, Reiter & Clarke 1975).
This is further established by Armstrong (1990) who reported that:

"British children have surprisingly low levels of habitual physical activity and many seldom undertake the volume of activity believed to benefit the cardiopulmonary system." (3)

The Health of the Nation Survey (1992) and the Allied Dunbar National Fitness Survey (1992) enhances the view that active children are likely to become active adults and therefore, physical educationalists should encourage active lifestyles. Indeed the Health of the Nation Document points out that:

"The maintenance of healthy lifestyles such as balanced diet and exercise in adulthood is more likely if established during childhood."(4)

With the Allied Dunbar National Fitness Survey reporting that:

"the exercise habit needs to start early, preferably in childhood as there is much more chance that people will continue or resume exercise in later years." (5)
There is abundant evidence to demonstrate the value of promoting an active lifestyle. (See Fentem 1992 for comprehensive views of its value.)

"It is clear that exercise can be of considerable benefit to everyone both physically and mentally, and should be seen as a necessary element of daily living at all ages. The time is more than ripe for restoring due value to the benefit of physical education."(6).

However, evidence that young people are not taking vigorous exercise (Cale and Almond 1992) has serious implications for their future health and one of the possible explanations for this decline could be the attitudes to physical activity that children acquire at school.

It may be that a positive attitude towards physical activity is one that is established in childhood, and therefore one of the roles of the P.E. teacher is to promote favourable attitudes in children, so as to encourage positive behaviour and physically active children.

As a physical education teacher, the author has become increasingly aware over a number of years that many children appear to enjoy physical education less as they grow older, and some even find ways of avoiding taking part.
"are we reaching pupils in such a way that they want to participate or are we creating barriers and turning people off being physically active?" (7)

One has only to watch children in any infant school playground to see how very young children delight in active play. It is therefore disturbing to observe the growing numbers of children in the secondary school who seem to have lost that impulse. It may be that some children reject physical activity at school as part of official adult values.

And as Hendry (1978) found in his survey of Scottish school children:

"It may also be that some of the custom and practice of physical education, leads some children to feel rejected, for example, in the selection of competitive teams." (8)

It would seem that the rejection of games and sports by children is not the only concern. Many people leaving school also leave physical activity behind them, although some take up exercise again after an interval of a few years, (Wolfenden Gap) whilst some stop exercising indefinitely. This could be the result of the pressure of earning a living, universal motor transport, or lack of easy access to sports facilities. It may
however, follow a rejection of the activities experienced at school, which maybe considered irrelevant to adult life, or what would be worse, this rejection may be due to unpleasant memories of physical activity during lessons. According to Thomas (1978) :-

"For some children physical education lessons are unhappy experiences in which feelings of low self worth are implanted or reinforced." (9)

This view is supported by Dickenson (1985) who analysed physical activity from a behavioural point of view. He writes of non-participants:-

"Performance in sport at school has been punished in some way and the avoidance has generalised to a large range of sports." (10)

As a result of working with other research students in a health based physical education project; newsletters written in the Journal of Physical Education, began to stimulate interest amongst teachers (in relation to finding more information) as to what happened to pupils who experienced such a restricted curriculum and consequently developed such
negative attitudes. However, when the project began to investigate pupils' perceptions of the curriculum they found a lack of data other than numerous American studies. The only real work of the time being undertaken by Hendry (1978) with Scottish school children and latterly with adolescents (1993). As a result of working with the project team it became apparent that there was a need for further investigations into pupils' perceptions of physical education, and their physical activity patterns, particularly in relation to boys in the secondary school.

It can be argued that pupils with favourable attitudes towards a subject maybe more likely to achieve in that area of the curriculum, and therefore, wish to further their experience of success.

Several authors have shown interest in the attitudes of pupils towards physical education, through the development of a variety of attitude scales. The first being Bowdlear's (1928) simple check chart to measure attitudes, followed by more reliable instruments being developed through the work of Wear (1950), McCue (1953), Kenyon (1968), Barker-Lunn (1969), Sonstroem (1974), Simon and Smoll (1974), and Martens (1979).

It would appear that much of the research in this area has centred on the the decline in favourable attitudes of girls
in the middle years of secondary school Coe (1984), Figley (1985), and Heathcote (1988), and the deterioration in attitudes as pupils become older. In addition, a further factor within this decline, could be the relationship between attitudes and intellectual ability.

This work is particularly concerned with the attitudes of younger children, namely boys in the first two years of secondary school, and the possible difference between two ability sets, being of lower and higher ability groups. It could be stated that at an early age attitudes may be already becoming unfavourable with some pupils for a variety of reasons, with behaviour assessed by the teacher being considered to be positive, when it may not be. If attitudes do affect behaviour then the consequence of bad experiences at an early age could result in non-participation.

If teachers believe that one of their aims is to encourage and develop positive attitudes towards physical education, then more updated information in this area would be important in helping to understand the complexities of how pupils perceive physical education.

As the majority of schools in the United Kingdom work on the secondary school structure transferring at 11 years of age, this could substantiate further the need to look at this
particular area, by suggesting that it is the first possible time that such research can be undertaken in the secondary school setting. With other factors such as more formalised P.E. lessons and exposure to specialist physical education teachers being of importance.

1.1. Area of Interest.

It would seem apparent from reviewing the literature, and by the lack of psychological studies into the attitudes of lower secondary school age boys, that P.E. teachers do not see this group as problematic, in terms of negative attitudes towards physical education and physical activity. However, it may be that the development of negative attitudes in adolescence has its beginnings in this age range and could affect behaviour later on, particularly when considering the difference in attitudes of lower ability set boys, who tend to get negative attitudes as part of an anti-school mentality.

1.2. What is the problem?

(1) To identify what the general attitudes of 11-13 year old boys are to physical education (P.E.) and physical activity (P.A.).

(2) To identify whether the attitudes of 11-13 year old boys differ in ability ranges (defined as banded academic
sets) within the area of physical education and physical activity.

1.3. Purpose

The purpose of this study is to identify and examine lower secondary school boys' attitudes to physical education and physical activity. To investigate what affects these attitudes, in order to suggest possible variables which the teacher may take into account and alter, in order to reduce the development of negative attitudes, or improve existing ones.

However, it became apparent from the literature, that whatever procedure was used to assess attitudes, whether questionnaire or interview, these presented a problem in general when dealing with lower ability children, particularly in terms of gaining data. A secondary purpose for the study then became apparent which was the development of a valid method of data collection when assessing attitudes of lower ability pupils in the secondary school.

1.4. Subsidiary problems

(1) A major procedural problem had to be resolved which was to see if a questionnaire could be developed which was appropriate for boys from lower academic bands in the secondary school.
(2) Is the deterioration in attitudes reported for adolescence and particularly girls already apparent for boys in the 11 to 13 age range?

(3) Are attitudes to physical education and physical activity reflected in

(a) Attitudes towards the teacher

(b) Pupils perceptions of themselves, or if extended interviews are the only method of collecting data from very young pupils or low ability boys in the secondary school?

This study attempts to identify and examine boys’ perceptions of physical education and physical activity in a South Yorkshire Comprehensive school. The data were collected from 120 boys aged between 11 and 13 years, over a period of 12 months. Information was gathered by means of a questionnaire, essays, pupil feedback sheets, formal interviews and informal discussions with the pupils.
CHAPTER TWO

2.0. REVIEW OF LITERATURE

2.1. INTRODUCTION.

In this chapter the review of literature will be divided into a number of major sections. These are as follows;

(a) Historical Background.
(b) Physical Education as part of the School Curriculum.
(c) Physical Education and the Teacher.
(d) Physical Education and the pupils' (perceptions of self, parents, friends and home environment.)
(e) Activity patterns of children.

An Overview.

It would seem from the review of literature that the attention drawn to the activity patterns of children has been quite a recent area of concern. It would also appear that this concern has been the result of a higher incidence of coronary heart disease and its associated health problems in adults and a recent trend towards a more sedentary lifestyle. This has been the result of a number of technological and cultural changes, and the consequent higher risk of hypokinetic diseases. Mechanisation has meant that fewer people are involved in jobs requiring physical exertion. This, combined
with the fact that hours of work have been decreased, means that it is more crucial to be active in leisure time.

However, there is evidence that people are not spending their leisure time actively with the overuse of cars and the increased popularity of television and computers, being stated as two main contributory causes. This notion is even more pertinent when related to children, and that in fact many children may not be as active as people believe (Dickenson 1985.) If this is true, then obviously there are serious connotations in relation to their health as adults. Official estimates of the watching of television by adolescents (and as has been previously outlined in this study), show that this activity is dominant over all others with the exception of sleeping, with the average individual viewing three hours of television per day (Tuxworth 1988).

Most people seem to think that children are over active rather than inactive. Young children often seem to have endless energy and be constantly on the move. However, as already stated there has been much concern recently that physical activity levels in children are in fact low to the extent that current levels may be detrimental to health. Morris (1988) claims:-
"For lack of exercise we are bringing up a generation of children less healthy than it could be and many of whom are likely to be at high risk in later life, with serious disease and shortened life expectancy."(11)

It is in the primary years that children are assumed to be most active, readily engaging in playful types of activities. If children are not active at this age then we may really have cause for concern, for a number of researchers have reported how activity decreases with age (Verschuur and Kemper, 1985; Fuchs et al., 1988 Dickenson, 1987).

Therefore, there would seem a need to encourage high levels of activity in children as there are immediate positive health benefits to be gained. It is vitally important that active lifestyles are therefore encouraged in the early years, as habits learnt in childhood often influence adult lifestyles, with evidence that exercise is very important for adults in helping to reduce the risks of many diseases.

In light of this, the four sections covered under the review of literature are seen as major contributory factors to the development of such positive attitudes.

There is no attempt in the review of literature to present the case for physical activity. Whilst at various points
in the study reference may be made to levels of activity, heart rate and the implied beneficial effects that may result. It is not the intention of this study to present or prove the case that physical activity is necessary for health and physical well being.

Because of the dearth of literature specifically relating to attitudes and activity patterns of 11-13 year old boys, the review will concentrate on work in relation to a historical background perspective, research into girls attitudes towards (P.A.) and (P.E.) and activity patterns of primary school children.

At the end of the chapter a summary of the principal findings will be outlined, which will aim to identify the major issues raised in each section.

2.1. REVIEW OF LITERATURE.

Before going on to look at research in relation to physical activity patterns of children, it would seem relevant to first put this in context by looking at attitudes of adults and children to both physical activity (A.T.P.A..) and physical education (A.T.P.E.) which had their beginnings in the early 1950s. It is intended to present the articles in chronological
order, starting with the early attempts to establish a valid instrument for measuring attitudes towards physical activity, with initially adults and then with children. The second area shifts the emphasis from such tests to the overall benefits of physical activity, and other researchers arguments for daily physical education in the primary school. Finally the focus is moved to work in relation to behavioural factors, and relationships in respect of differences in sex, age, form level and social setting, which have an influencing effect on attitudes towards physical education.

Where appropriate, comparisons will be drawn between the methodology, observations, results and conclusions of the various authors under review.

2.2. HISTORICAL BACKGROUND.

The work of C.L.Wear (1951) was the first real attempt at developing a systematic instrument for assessing both individual and group attitudes towards physical activity. His concern was centred around the development of a test which had high validity, ease of use in the 'field' and application to other groups, other than college men for which it was initially developed. It was for this reason that such factors as, the formalisation of questions on the basis of past
data, and clarity of statements were paramount. This, he would seem to have done successfully, as his inventory in its shortened form was seen as being robust and consequently used by more recent researchers. e.g. (Kenyon, 1969. Williams 1982).

Wear established a format by considering the outcomes and benefits of physical education in which there appeared agreement and subsequently outlined factors such as providing a sense of well being, the development of muscular strength, and the development of muscular endurance. From this he produced a set of statements which reflected such outcomes. Wear was later to be criticised by Kenyon (1969) as it did not take into account variables relating to behavioural disposition and therefore, in his opinion, explore deeply enough attitudes towards physical activity.

Previous studies had been mainly of the questionnaire type, which tended only to relate to the likes and dislikes of the P.E. programme. Within these studies only three had attempted to use attitude scales, whereby, the Thurstone method (1959) of assessment was used. Wear, condemned this as not being detailed enough, as it only required the subject to respond to those statements to which he agreed. This type of instrument did not give an overall score by adding the sum of the questions, but was consequently assessed by 'judges'.
In contrast to this, was Wear's Likert-type scale ranging from 'strongly like', to 'strongly dislike', with each statement having to be answered.

This was the basis of Wear's P.E. attitude inventory, which was later reduced in number from 120 to 40 statements and became known as the 'short form'. It was seen by several researchers (Williams 1983) to be a good basic test which could be used, because of its level of vocabulary, with high school children, and had an ease of use by a wider clientele including teachers. Moreover, it was Wear's opinion that with adaptation, it could be used as a means of assessing attitudes in relation to specific sports and also in evaluating changes in attitudes to physical activity.

The work of Kenyon (1968) was an attempt to establish a more valid means of assessing attitudes towards physical activity collecting several statements in relation to such attitudes, to form a scale which measured the degree of affect with satisfactory reliability.

He felt that the shortcomings of previous work, lay in the fact that not enough attention had been placed on the characterisation of physical activity. In other words too many studies had been limited to physical education, team games or sports, and where scale procedures were used, as by Wear, the
researchers did not take enough account of the multi-dimensionality of the domain in question.

Consequently, Kenyon tried to overcome such problems by designing an independent unequivocal scale, for determining attitudes towards physical activity. He therefore, felt it necessary to develop a suitable working definition of attitudes, which he saw as:

"A latent or non-observable, complex, but relatively stable behavioural disposition, reflecting both direction and intensity of feelings towards a particular object, whether it be concrete or abstract." (12)

If this statement is accepted, it could be argued that particular studies of the direct questioning form, could be suspect in relation to validity, as they do not pay enough attention to issues that are latent and unobservable.

There could be criticism levelled at this issue, as perhaps inventories such as Wear's may have advantages in their use with lower ability children.(A factor mentioned earlier in this study, when deciding on the form of questionnaire used.)

Kenyon, therefore, perceived physical activity as being reduced to more specific and meaningful components or logical
sub-sets. This, comprised of, his six sub-domains of attitude towards physical activity as:-

(a) Social Experience.
(b) Health and Fitness.
(c) Pursuit of Vertigo.
(d) Aesthetic Experience.
(e) Catharsis.
(f) Ascetic Experience.

From each of these sub-domains, seven alternative Likert type attitude statements were formed, to produce two inventories, one for college men and one for college women.

Kenyon, attempted to develop attitudes scales representing each of the dimensions of a multi-dimensional model, for characterising physical activity, and concluded that it was a moderately reliable and valid scale (except for physical activity as catharsis) for use in research purposes.

The work of Simon and Smoll (1974) followed on closely to that of Kenyon, and much of their work was based on his attitude scales, but with substantial word changes. The major reason being that these researchers were mainly working with fourth to sixth grade children in elementary schools. Their aim was the construction of an instrument
which would allow for a lower reading competence, and thus be easier to use with children, and therefore provide a simplified inventory. (Batt Inventory.)

They expressed the same concern as Kenyon in that the characterisation of physical activity was often limited to P.E. sports, and games, and like him decided on a systematic differential format, that they felt had a higher reliability than Wear's likert type inventory.

Having administered the test, they expressed similar reservations to Kenyon, in respect of catharsis (and also health and fitness) but concluded it to be suitable for testing children's' attitudes to physical activity. (C.A.T.P.A.)

The work of Wear, Kenyon and Simon and Smoll seems to have laid the basis for the developments of instruments to measure attitudes towards physical activity. Wear began by devising a likert type inventory for use with college men, its advantage was that it was a good basic test which could be easily administered. Kenyon saw this work as having several major drawbacks, particularly regarding its general statements and lack of concern with the multi-dimensionality of the domains used, and developed therefore, independent scales for determining attitudes to physical activity of college men and women. Simon and Smoll extended the work of
Kenyon and concentrated on developing an instrument for use with elementary school children by simplifying its form. It was only at this stage that attention was focused on the attitudes of school children towards physical activity and the subsequent need for a simplified instrument, which was relevant to age, sex, and form level of its subjects.

These procedures gave considerable impetus to attitude research in the 1970s and 80s. However, once research was centred on the investigation of children's attitudes in the primary/elementary age range, the problems associated with the use of questionnaires became apparent. At the same time the value of descriptive data gained from more informal approaches was recognised.

The next stage in the evolutionary process was a broadening of the investigation into assessment of attitudes of children in relation to physical education. With attention being given to the growing 'call' for daily physical education, whilst other researchers concentrated more on behavioural disposition factors such as self esteem (SE) and body esteem (BE) and their effect on attitudes in relation to age, sex, form level and social setting.

In consideration of the former area Bailey (1972) contended that we were :-
"Entering a society characterised by sedentary living patterns, emotional stress, poor dietary habits and lack of physical activity." (13)

:- and in his paper "The growing child a need for physical activity," suggests that Canadian children were not receiving a school programme which was rich in physical activity. Many of these programmes he goes onto state tended to deprive a great many youngsters of their normal childhood instincts for play, and in fact discouraged those very children who needed activity the most. Therefore, there was a consensus of opinion from administrators and teachers alike that:-

"All primary children should have the opportunity in schools to experience effective daily instruction."(14)

The beginnings of this ideal had its origins in France (L,Arajet 1931) and was later developed at the Vanes School (1961) with other such studies taking place in Brussels and Japan. These studies confirmed that through daily P.E. not only was health and fitness improved, but there was an increase in other factors such as academic results and good discipline. In fact there seemed to be an all round better performance by the
children. These schools began to be known as 'One Third Time', because one third of the time was devoted to physical education.

Bailey reinforces these findings by suggesting that besides the improvement in physical health, other areas such as the avoidance of health problems, encouragement of participation in adulthood, promotion of a good self concept, confidence and adaptability were also established.

He basically concludes that physical activity is essential for all pupils from the point of view of supporting normal growth, health, and the development of positive attitudes towards daily physical education, which in turn will lead to higher levels of motivation in relation to physical activity in adult life. Emphasise is also placed on the fact that there needs to be more P.E. during the school day, (minimum 30 mins) and less time spent on academic studies.

This last issue is continued and explored further by the work of Martins and Grant (1980) in their book, 'A survey of Daily P.E. in Canada.' The report summarises the results of some 70 programmes of daily P.E. implemented in Canada since 1973, and compared these with other conventional programmes of physical education at the elementary level. The
conclusion gained from the survey was that there seemed to be a growing call from teachers and administrators for the development of daily P.E. programmes. In areas where such programmes were implemented enthusiastically favourable comments were received from the majority of children, teachers and parents. Reactions were positive, with children having an improved self concept and a better attitude towards school.

Another study which outlined the possible benefits from regular physical activity, was by R.G.Glassford in his paper 'Compulsory P.E. Programmes in Alberta.' As in studies mentioned previously there was overwhelming support for daily P.E. in the curriculum from parents and children. Again, physical activity was seen as having vital contributions in the area of health and fitness but particular concern was expressed about an over emphasis in competition and the importance of winning by parents in such programmes.

The last study I want to consider in relation to this area is that of L.R.T. Williams (1982), in which he viewed the outcomes of daily P.E. programmes on New Zealand primary school children. The main focus was in respect of positive attitudes towards physical education. His test for attitudes
was based on four dimensions of Kenyon's sub-domains, and basically discovered that females had more positive attitudes towards the aesthetic factors than males, who had more positive attitudes to the pursuit of vertigo. His main conclusions was that attitudes was a function of sex not age and that behavioural dispositions such as self esteem and body esteem was a function of sex.

In summary of this section, it would appear that many researchers in this field, were not only convinced of the beneficial effects of increased physical activity as outlined, but that daily P.E. of at least 30 minutes a day for primary school children, could positively encourage and develop favourable attitudes towards physical education. This was mainly in respect of, improved health and fitness, a better self concept, improved behaviour in schools and increased chance of participation in physical activity as an adult. Ultimately, the future being seen as holding possibilities for the development of daily P.E. programmes in schools, and as Pollatscheck (1978) states :-

"It would be fitting to see the 80s as the decade of daily P.E." (15)
A parallel thread of the concern of some researchers, Hendry (1969), (who looked at variables influencing attitudes, such as the school curriculum, teacher perceptions and extra curricular concerns,) and Williams (1984) (who looked at how variables such as self concept, sex, age, form level, and social setting influence the pupils' attitude towards physical education,) will be scrutinised in more detail later in the review of literature.
2.3. PHYSICAL EDUCATION AND THE SCHOOL CURRICULUM.

2.3.1. Pupils' perceptions of the P.E. programme.

Before investigating the way in which pupils view the physical education programme, it may be firstly pertinent to observe what pupils have presented to them as physical education?

There has been little information available in this country which could provide an insight into this question. However, there has been several surveys conducted by education authorities which may provide some realistic information, these surveys include :-

(1). Schools Council Survey (Kane 1974)
(2). Leicestershire Schools Survey (Boyall 1979)
(3). Thames Polytechnic (Thomas 1980)
(4). Wirral Schools Survey (Williamson 1981)
(5). Trafford School Survey (Greenfield 1982)
(6). Liverpool Schools Survey (Bayman 1982)
(7). An East Midland Schools Survey (Hill 1986)

All of these surveys used Questionnaires in an attempt to quantify information about what was being taught in physical education departments in schools. The research
procedures varied from survey to survey and it would be very difficult to draw specific conclusions. However, from the information available trends can be observed which provide strong evidence for generalisations about the current physical education curriculum.

The Schools Council Survey (Kane 1974) used a rank order of the relative importance attached by Physical Education Teachers, to areas of the Physical Education Curriculum. The results showed that games were taught the most with gymnastics and athletics coming next, dance and outdoor pursuits had a low rating.

The Survey gave the impression that all of these activities were actually undertaken in schools, when later surveys showed that this was not the case.

The Survey undertaken by Hill (1986) demonstrated patterns which occurred in other local education authority surveys. Briefly, Hill identified the following results;

Games dominated the physical education programme for both boys and girls. Athletics and gymnastics take up the next largest allocation of time, but represent only a quarter of the whole programme. Dance was non-existent for boys and represents a small proportion of curriculum time for girls.
Swimming in some authorities was not included in the programme.

The time allocated to Physical Education appears to be similar across local authorities, but it appears to be reduced in year 3 and continues to decrease in years 4 and 5. Once again, this is consistent across the local education authorities.

This study provides one of the most comprehensive surveys of the Physical Education curriculum in this country. Over several years he has gathered data from 608 secondary schools via a questionnaire and interviewed 16 Heads of Department, and analysed over 70 Physical Education Syllabi.

Very briefly the major findings of this survey were :-

(a) Teaching Styles tended to be direct.
(b) Major games dominated the programme with additions of gymnastics, swimming, athletics and dance making up the remainder.
(c) The curriculum in the 4th and 5th year was usually described as an option programme and had a wide range of choice.
(d) Extra Curricular activities were sometimes given greater emphasis than the normal curriculum.
(e) There was little evidence that teachers were making much more effort to systematically evaluate/assess courses or children.
(f) Curriculum planning was often informal or casual.

In summary, it could be seen that teachers placed most emphasis on the content of their programmes, with less emphasis being placed on aims and objectives, teaching method and any form of evaluation, (which was seen as the least important factor.)

This then, leads the review onto the second part which is an analysis of how pupils view the physical education programme.

Research into pupils' perceptions in education has centred almost entirely on the classroom. There is very little evidence about how young people view Physical education. However, there has been two major studies which can provide a valuable insight into this area.

In his book 'Schools Sport and Leisure' Hendry (1969) places great importance on the role of self concept in relation
to determining attitudes towards physical activity. It was his view that because P.E. is such a popular subject on the timetable it can have a great influence on such factors as the childs body esteem (BE) and self esteem (SE).

He also outlines the importance of the type of activities offered and the influence of the teacher in affecting attitudes of pupils towards P.E. Other variables that seem to affect attitudes are the influence of social class and physical education for the elite.

Hendry states that a persons view of himself in relation to physical activity is often the result of his self concept. He suggests that a favourable self concept is dependent upon the body type of the individual.

"Reactions to, and expectations of body type become incorporated into the recipients own body concept, and thus provide a framework for his body concept which becomes a significant part of the total self concept."(16)

this is substantiated by Horrocks (1969) who says:-

"A persons physique is to him the image of himself."(17)

The result of this is an establishment of the teachers
perception of the child, and a reaction to either encourage or discourage participation in physical education, depending on whether the qualities of the pupil match the qualities of the teacher:-

"Below a certain level of musculely and extrovertism motivation towards participation is reduced."(18)

If the pupil is encouraged to participate in extra-curricular sports then he may become encompassed in the rituals of the school and factors such as status are increased. This could be because of publicity in relation to being a member of the school team. For example the child may hold a post of responsibility, such as team captain or be mentioned in daily assemblies, all of which have the effect of heightening the individuals self image. Consequently, if the teacher perceives the child as having a low self image then the opposite happens. They may be seen as 'unattractive' and be restricted in relation to participation in sport. This may be one of the early factors in pupils being 'turned off' physical education.

It could be that girls for example, during adolescence, perceive physical activity as being unfeminine, when they are at a stage when being feminine is very important to their self
concept, and consequently 'turn away' from physical education. A factor highlighted by Heathcote (1988) and reinforced by Allott (1966) who stated:—

"the majority of girls rejected the programme of physical education at school, and this was reflected in the lack of willingness to participate in physical activity after school."(19)

This is substantiated by Smallridge (1967), who found that girls 16 and 17 years of age showed a sharp decline in their participation of major games after the final year at school.

The effect of this 'switching off' could be a signal of boredom for both boys and girls, and consequently may result in some pupils being disruptive. This also could be reflected in pupils shunning physical activity after leaving school, and perhaps not using dual use facilities in their leisure time because they are linked to the school.

One other area that can affect attitudes towards physical education is that of social class, and Hendry suggests that pupils most likely to favour participation in sport are pupils that hold middle class values. This he attributed to the
fact that generally the middle class had better access to information and that parents were more likely to be supportive and give encouragement to their children. Added to this is evidence that often children adopt a lifestyle similar to that of their parents, are likely to be more articulate, and feel more at ease in such a social setting. This is supported in the book, 'Youth and Leisure in an Urban Sprawl.' When the author states:

"There is evidence from this study to support the second hypothesis, that sport-loving youngsters are more commonly found among children of middle-class origin than among children of working class origin, and this difference is much more marked for girls than for boys,"(20)

Hendry (1978) in his major study in central Scotland of 15-16 year old pupils, therefore reinforced this and made some other major conclusions which where:-

(1). More than half the boys and two thirds of the girls were non-participants in extra-curricular sports.

(2). The group of non-participants rarely suggested a dislike of the activities offered
at school.

(3). Comments were related to the restrictions of the learning situation they experienced.
(4). A dissatisfaction with sports experiences associated with the cold and playing full scale games in poor weather conditions.
(5). A desire to improve their physical skill was an aspiration of most pupils.
(6). The type of activities the teacher chose to include in the lessons without the pupils really understanding its inclusion.

Hendry also identified other attitudes connected with physical education which were :-

(a). Active pupils were aware of their own ability and enthusiasm, which usually manifested itself in a willingness to attend physical education lessons, and a desire to improve their skill.

(b). Active pupils were also aware of the 'attention' given them by members of the physical education staff, and the position of responsibility in school that usually went with
such positions.

(c). The influence of body weight or shape on the attitude of the pupils. The pupils perception of his/her condition in relation to how it can affect social relationships, school performance, and emotional adjustment.

The work of Williams (1982), is another major work relating to the area of attitudes of young people towards physical education. His research (as previously mentioned) involved several studies of New Zealand primary school children, and stated that attitudes towards physical activity are often as a result of self image, sex, age, form level, and social setting. He reinforces this by stating that several studies have shown differences according to sex, type of curriculum offered, the relationship between urban and rural areas (Jubela 1973) and form level (Bell 1953).

"Attitudes towards physical education are the sum extent of a function of body esteem and self esteem, and that these acquired behavioural dispositions should receive close consideration in planning, implementing and evaluating a P.E. programme in schools."(21)
He began by assessing the effects of daily physical education on children's attitudes towards physical activity (1982). The sample was 251 pupils, aged between 9 and 11 years from 3 primary schools. The attitudes were assessed by Kenyon's (1968) original APTA inventory amended by Simon and Smoll (1974). It consisted of 19 items arranged in a 5-point Likert scale. Subjects were asked to indicate how often they participated in a variety of activities in terms ranging from 'almost every day' to 'hardly ever'.

The results showed that participation in physical education was associated with positive attitudes towards physical activity and that there was partial support for the view that positive effects on attitudes would result from a daily physical education programme.

Williams' next study was concerned with self esteem (SE), body esteem (BE), and attitudes towards physical activity of high school students (1982). Williams again used a questionnaire designed by Kenyon (1968) to measure ATPA. Self-esteem was measured by the Guttman 4 point scale (Rosenburg 1960) and body esteem by a 24 item semantic differential scale (Kenyon 1968).

The results showed that female secondary school pupils hold more positive attitudes towards physical activity than
males. That females students were drawn to the aesthetic considerations, whilst the male students regarded the pursuit of vertigo as more important. Williams suggested that attitudes to physical activities are to an extent a function of sex not age, and that male students held more positive attitudes towards self and body esteem than female students.

Williams' next study, looked at attitudes of High School students towards physical education (1983). His sample was 814 boys and girls in 3rd and 5th form classes from 3 schools. The methods of assessment were Wear's Physical Education attitude Inventory (1951), the Guttman scale for self-esteem (Rosenberg 1965) and Kenyon's (1968) semantic differential scale for assessing body esteem. The results showed that attitudes towards Physical Education were generally favourable for boys and girls. Some difference were observed between sexes and ages for self-esteem and body esteem. For example the older girls seemed to have a more positive concept of the self as well as a more positive perception of body image.

This study was later extended into an assessment of the attitudes of New Zealand School Pupils towards Physical Education (1983), using Wear's Physical education attitude
Inventory as the method of assessment. The sample was \( n = 5,101 \) form I and form IV boys and girls from several state schools. The results showed that the attitudes of pupils towards Physical Education was generally positive although specific differences exist according to various levels of dependent variables of form, sex, geographical location and school type.

Finally Williams looked at the relationships among body-esteem, self-esteem and attitudes of pupils towards Physical Education (1984). The sample was again, \( n = 5,101 \) form I to form IV boys and girls in state schools. Assessment of attitude was by Wear's Physical Education Inventory which identified self-esteem, Rosenberg (1968), and Body-esteem (Kenyon 1969). The results showed that attitudes towards Physical Education are to some extent a function of body-esteem and self-esteem and that these should receive close consideration in the planning, implementation and evaluation of Physical Education in schools.

As has been shown from this part of the review, the way in which children view physical education can have a profound effect on how they view physical activity as a whole. It has been stated that the way in which the physical education
teacher sees the child maybe a contributing factor to such positive of negative attitudes. The next part of the review concentrates on the influence of the teacher in the formation of such attitudes.
2.4. PHYSICAL EDUCATION AND THE TEACHER.

Several studies have shown that the physical education teacher may have an important influence on pupils' attitudes towards physical education (Mason 1965), Mosston (1966), Cheffers (1972), Mancini (1976), Hendry (1978), Ikulayo (1983), Morris (1985), Figley (1985).

Mason (1965) when referring to the changing of a pupil's attitude from a less desirable to a more desirable one states: -

"....... this is largely a matter of the teacher's approach adapted to meet the social and physical conditions in which the new attitude is to develop."(22)

The author goes onto say: -

"To change a person's value system, it is at least necessary that a teacher can, (1) assess the belief structure of the pupil (2) communicate to pupils the values of that which he intends to teach (3) involve the pupils so effectively that the pupils appreciates the relevance of what is being taught and can absorb its values into his own value system in such a way that greater consistency is achieved, obviously it is the teacher rather than what he teaches that is vital."(23)
Mancini, Cheffers and Zaichkowsky (1976) also support the view that teachers may influence children's attitudes towards physical education. The author's study specifically relates to the decision making process within the learning environment, and later states that there is an important connection between positive attitudes and improved learning attitudes. This, results in children who enjoy the physical education programme being more likely to learn, and more receptive to what is being taught. In addition, the study showed that pupils involved in decision making within the physical education programme, demonstrated more positive attitudes than pupils not involved in the decision making. It was therefore the teaching style and approach which was seen to have an effect on the children.

Mancini et al (1976), refers to Bany and Johnson (1964) who stated that:

"Greater change in behaviour is produced when students are permitted to participate in decision making rather than when a decision is imposed upon the group by a teacher."(24)

In support of this statement Mancini also refers to Charles (1972) who wrote that:

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"... teachers who make all the classroom decisions tend to be quite dominating in class activities, using more talk time and deciding on and directing most of the students learning activities. Students of teachers that share in the decision making process with students by being more indirect, by asking more questions, by accepting students responses and by involving students more, usually like school better."(25)

It may be argued therefore that teachers who are in favour of the pupils having more involvement with classroom decision making achieve better results and consequently develop more favourable attitudes in children.

Mancini et al (1976) concludes that his study supports the use of decision making by the pupils in a classroom process and adds that :

"One may develop more positive student attitudes towards the programme and the interaction patterns between teacher and students occur more easily in a co-operative atmosphere rather than a docile environment."(26)

In addition Ikulayo's (1983) research stresses the importance of the personalities of the physical education staff
when considering the possible variables which could markedly affect the pupils attitudes towards physical education.

Morris (1985) refers to the affect of the physical education teacher when he states:-

"As the educational leader in the classroom, the teacher has the greatest responsibility to influence its atmosphere."(27)

The author adds that it is important for the teacher to :-

"..... explore potential sources of positive and negative attitudes among students."(28)

and that :-

"a student's favourite activities are often associated with excellent teachers".(29)

Morris (1985) also stresses that if a teacher's enthusiasm and approach towards a class produces a warm and pleasant atmosphere then pupil's responses are more likely to be favourable and positive.
Figley (1985) who attempted to identify the causes of both negative and positive attitudes towards physical education, found that the teacher had an important influence in this area. It was revealed that the teacher (and the curriculum as previously mentioned) came top in a rank order depicting the causes of positive and negative attitudes, and outline factors such as sensitivity, fairness, and personal characteristics as being some of the traits demonstrated.

The pupils stated that the teacher was the main contributor in influencing negative and positive attitudes towards physical education. Furthermore, the teacher was also stated by the pupils as being the second main factor in influencing negative attitudes towards physical education.

Figley (1985) in particular contributes to a more detailed analysis of the influence of the P.E. teacher and concludes that it is the teacher reinforcement or lack of reinforcement which ranks highly as a casual factor influencing children's positive and negative attitudes towards physical education.

As we have seen earlier in the review, the last two statements are echoed by Hendry (1978), and Williams (1984), who also contested that the teacher had a great influence on the development of positive or negative attitudes of the child.
towards physical education.

Therefore, to summarise, it would seem that the physical education teacher could be one of the most important influences in affecting children's attitudes towards physical education; and as already briefly outlined, social processes could also be another pertinent area in the development of children's attitudes towards physical education. This factor is looked at in more detail in the next section.

The next section switches the focus from the perception of the P.E. programme, to the perception of the pupils own self image and other social processes such as the home environment.
2.5. PHYSICAL EDUCATION AND THE PUPILS (Perceptions of self, parents and home environment).


According to Mason (1965) :-

"Attitudes are never acquired in a social vacuum, they are acquired by a person being a member of a group and by accepting or rejecting the values of that group as a point of reference." (30)

Abel and Knapp (1967) found similar comparisons between girls' attitude towards physical education and social influences. The authors stated that social factors were of great importance when attempting to examine physical activity interests of secondary school girls and that going out
with boyfriends was the most preferred non physical activity.

Moir (1977) studies the aspect of socialisation in greater depth. The author states that a child is affected by all aspects of his/her environment from an early age and that one group of influences are those from the people surrounding the child (i.e. those which socialise the child). Moir goes onto say that those people encourage the child how to behave and show the child his/her place in the social world. Through an experience with another person the child discovers how other people see him/her and visa versa. Moir (1977) concludes that:-

"Some people provide friendship, others leadership, others authority and so on, and by assimilating the actions and reactions of such people towards itself, the child can build up a picture or image in its own mind of what other people expect of it,"(31)

Bothby et al (1980) refers to another important aspect of the socialisation process in its contribution to the influence of children's attitudes towards physical education. The authors stated that the fundamental influence on children's attitudes towards physical education was their early introduction to
physical activity by their parents. Boothby, adds that parents sporting interests (or disinterest) are likely to be relayed to their children and that parental interests may include their own sports activity, their interest in watching or reading about sport, their amount of sporting participation with their children, and their attitudes towards taking part and competing. Boothby, concludes that:

"The most striking feature of sports participation appears to be the importance of continuity. If there is early participation, the chances of participation in later life are good." (32)

Ikulayo (1983) supports Boothby's findings and adds that parental influences and interest could markedly affect children's attitudes towards physical education.

In a later study Coe (1984) also acknowledges the importance of family interests and local opportunity in influencing children's attitudes towards physical education. However, the author is more involved with the examination of young peoples interests, perceptions and general attitude towards physical education in great depth.
To summarise Coe's findings, it may be useful to note that the study showed that boys seemed to be more concerned with skill and performance in their reasons for wishing to play for a school team whereas the girls had mainly social reasons. In addition 75% of the sample children participated in physical activity out of school. It was noted that many of the activities did not relate to the children's own school programming. Also more boys than girls participated in physical activities in their spare time and the only popular team sport was football (participated in, only by boys).

This study aimed at encouraging teachers to adapt or modify their P.E. programmes in order to cater for the needs and interests of their pupils.

In a more recent study Figley (1985) devotes more consideration to the specific area of the influences on children's attitudes towards physical education. The author states that only a few positive attitudes gained by the children were obtained through peer behaviour and that these few were associated with the pupils concern for compelling one another to score or perform well in a team game situation.

In contrast, the report showed that many pupils felt rejected through experiences where they had been chosen last by their friends for a team game. (A situation which has been
portrayed in one of the cartoons in the Brainteaser Questionnaire). In addition, many pupils felt rejected when they had been involved in a situation where they had been ridiculed or teased. Figley (1985) discovered that the indignation arose most often when the pupil had not shown good ability (i.e. motor skills) during a game situation that resulted in the team's consequent loss of the game. It was apparent that young people were more likely to blame, criticise and fall out with each other than were to praise or encourage one another for a good performance.

When examining the influence of the pupil's own self perception Figley (1985) made some useful observations. Some of the students in the study had stated that they loved physical education because they had always been good at it or had been brought up with a sporting family. However, these factors do not seem to relate to the classroom experience. The relationship between these factors and the pupils self perception seemed to have developed from successful participation in an activity. The author adds that pupils may describe themselves as successful if they have won or defeated someone else in a competitive situation, or had shown themselves to be outstanding in a team event.
In contrast, Figley (1985) showed that negative attitudes may develop through a pupil's lack of confidence or thinking that they are incompetent at physical activity. Furthermore, the pupils did not blame anyone for their lack of ability. They put it down to reasons which implied that they had never been any good and that it was accepted that nothing could be done to make them good at physical activity.

To summarise Figley states that:-

"The perceptions of self as successful is obviously a plus for positive attitudes, however, participating in activities in which one does not stand out as incompetent may provide the student with a sense of success due to the absence of failure" (33)

In an earlier study Barker-Lunn (1969) had a similar view to Figley in that the author values the necessity to evaluate children's perceptions of themselves as an important influence on their attitudes towards school work in general. Barker-Lunn (1969) suggested that girls had a poorer self image than the boys and acknowledged that Sears (1963) had found the same in his study. The author adds that self image showed to rely upon the child's relationship with the teacher and that if the pupil had a good self image the pupil also
tended not to be anxious, Barker-Lunn concludes that:

"Those whom the teacher rated as pleasurable tended to be those with a good self image and similarly also those who she rated high on ability. The child's relative ability seemed to be an important factor for self image..." (34)

Morris (1985) acknowledges the need for a greater understanding of children's attitudes towards physical education with a view to helping teachers understand their pupil's likes and dislikes and how they feel about themselves in a physically active situation.

The author adds that many students may seem to have favourable feelings about certain activities, however, the pupils are not necessarily confident or at ease when actually taking part in those activities. Furthermore, many children are not confident about themselves in a social situation and when performing in front of a group of other children they may feel inhibited, thus appearing not to enjoy the particular activity.

Morris suggests that it may be important to examine children's feelings about themselves in an active situation in order to establish whether their self perceptions affect their attitudes towards physical education.
According to Morris, feelings of competence, social skill and social behaviour are all important factors of participation and adds:-

"Empathy, understanding racial and sex role stereotypes, willingness to share and to take turns, acceptance of suggestions and criticism from peers and confidence in various group situations, all contribute to interaction with classmates and indicate an ability to participate in settings where other participants also are involved."(35)

An extension of the author's concern for an understanding of children's self perception was to further the examination of psychosocial factors that influence participation. Morris (1985) emphasises the importance of attending to these factors, which in turn would create an affect on how the teacher prepares instruction, produces materials and resources and designs activities. The author adds that negative conditions for participation may develop if these factors are not examined carefully.

To summarise Morris' psycho social factors, in order to provide a framework for evaluation by the teacher with an aim to increase pupil participation in physical activity, the following factors may be observed:-
"There are three critical periods in any learning episode...associated with each of these critical periods are two general factors that can be used by the teacher......."(36)

1. BEGINNING - attitude (the student's feelings about learning environment, teacher, subject matter and self) and need (the basic requirements of the student at the time of an activity)

2. DURING - stimulation (the sensations that affect the student via the learning experience) and affect (the emotional experience of the student while in the learning environment)

3. ENDING - competence (the skill and knowledge that result from an activity) and reinforcement (the reward attached to the learning experience for the student).

Morris (1985) clearly identifies the need for assessing the pupils' participation in physical activity and stresses that when pupils are actively participating in physical activity, communication develops, discipline problems lessen, anxiety decreases, and teaching is enjoyable. Furthermore, when pupils oppose participation, communication is poor, discipline problems increase anxiety increases and teaching is a burden. It seems evident therefore, that a pupil's enthusiastic
involvement in physical activity may increase positive attitudes towards the activity and consequently, increase the pupil's desire for continued learning.

Coe (1984) attempted to gain more information on children's interpretation of physical education. Open ended and closed questions in the questionnaire were issued to 56 children from top classes of two different middle schools. Coe stated that physical education had a restricted meaning for most children and that many pupils saw physical education as meaning gymnastic type activities rather than sports and sport related activities. Coe concluded that this can only be because children see physical education and games and sports as different activities and that much previous research into children's attitudes towards physical education, may be seen as relating to only a restricted set of activities.

Morris (1985) in his book "Physical Education from Intent to Action", devotes a chapter on assessing students participation. He implies that due to the varying views about measurement in many aspects of participation in physical activity no single assessment method is likely to prove totally reliable. Morris suggests that researchers should adopt a method of assessment which would be most suited to dealing
with the kind of information required for the study. In evaluating children's participation in physical activity he proposes that the researchers own instruments may be more useful and reliable than using standardised instruments.

The next section switches the focus from children's attitudes to physical education and physical activity and concentrates more on the activity patterns of young people, and asks the question, are pupils as physically active as people think?.
2.6. ACTIVITY PATTERNS OF YOUNG PEOPLE.

In the past most people seemed to think that children were over active rather than inactive. Young children often appear to have endless energy and be constantly on the move, however, recent research shows in fact that this is not the case. Gilliam (1982) points out that:-

"Kids are not all that active, not on a voluntary basis"

(37)

He further suggests that:-

"they (children) do not voluntarily engage in high-intensity physical activity."(38)

The possibility that children are not highly active has led a number of researchers to study the activity patterns of children. With the awareness that the physiological and psychological benefits of regular exercise are desirable for the maintenance and enhancement of health. The main concern has been to try and determine whether or not children are in fact doing sufficient exercise of an
appropriate nature to attain these benefits.

This is supported by Rowland (1990), who states:

"the rate of decline of habitual exercise during childhood is both dramatic and disturbing. Many of the health-related benefits of exercise relate to the amount of daily exercise, and it is assumed that exercise habits during childhood predict adult patterns of physical activities."(39)

The research carried out in this area has been varied, both in terms of the methods used to collect data and in the accuracy of the results obtained.

Making comparisons is difficult since studies have also been carried out on children of differing ages and over differing lengths of time. However, the following provides a summary of the work that has been performed to date.

Perhaps one of the most extensive studies using self-report technique was that carried out by Kannas et al (1986). Data on activity levels in children was collected in the main from four countries, namely, Austria, England, Finland and Norway using self-completed questionnaires. The target group for the study was children of 11.5, 13.5 and 15.5 years old. This first set of data was collected in 1983/4 and then a follow up survey was carried in 1986.

Basically the results showed that a high percentage of eleven year olds took part in physical activity two or three hours a week. There was no consistent differences between the four countries, with each scoring approximately 50%. This would seem a high percentage at first glance (showing every fifth child to be participating in physical activity). However, closer examination shows that this impression to be misleading. Without definite data on the intensity of activity performed, it is impossible to ascertain whether or not the children are in fact doing sufficient activity.

Relatively high levels of physical activity amongst children were found in a study carried out in Finland (Telema et al, 1985). This study looked at children of three
and six years old and 9-18 years old with levels of activity being assessed by means of a questionnaire (for the 3 and 6 year old children the questionnaire was designed for parents to fill in.)

The results led the researchers to conclude that:

"a large proportion of Finnish children and adolescents are physically active." (40)

It is very hard to draw definite conclusion, although it was established that most children spent their leisure time actively. The results rely on the children's' individual interpretations as to which activities fell into each exercise intensity group.

Another study which used a questionnaire to collect data on activity patterns was the Canada Fitness Survey (Hebbelink and Shephard, 1986). This was an extensive survey which looked at many aspects of health and fitness. Pertinent to this review is the information obtained on patterns of physical activity and total energy expenditures. The assumption was made that three hours per week of 'activity' for nine months or more each year was an adequate level of exercise for the children. Based on this assumption,
children were classified as active, moderately active or sedentary according to the amount of activity they did.

Children were classified as active if they did an average of three hours or more per week of physical activity for nine months per year or more; those children who did less than three hours a week, or an average of three hours per week for less than nine months a year were classified as moderately active; whilst any children doing less than three hours of activity per week for less than nine months in each year were said to be sedentary.

It would appear from the results, based on the Canadian Fitness Survey standard of activity, that approximately 75% of young Canadian children are sufficiently active. These favourable findings are similar to those found in the previous study but contrary to the majority of other studies, which show children to be much less active. However, as in the previous study there is no attempt to determine the intensity of the activity that children are doing, and the adequacy of activity is gauged from its frequency and duration. Some types of exercise, for example, normal leisure walking, (which accounted for a high proportion of all exercise reported in the survey) generally lacked the vigour necessary for a training effect, especially in young children.
The more rigorous definition of 'vigorous' activity showed that children were not as active as it first appeared, and there is an indication that, from the point of view of cardiovascular healthy existing activity levels are inadequate.

Another interesting observation drawn from this study was that physical activity patterns were significantly determined by the local environment. Results suggested that in sparsely populated areas young people were more inactive than in densely populated areas. Intensive exercise aimed at physical fitness was more evident in cities than in the countryside.

Evidence of insufficient activity levels among children was found in a similar study that used self-report methods. The National Children and Youth fitness Study was carried out in North America on a sample of ten to seventeen year olds. The findings from this study are more straightforward and the data collected was extensive, including all activity the children took part in and making allowances for seasonal variations.

Based on the previous definition of 'appropriate'
exercise, the results from this study showed that:-

"probably half of the American children and youth in grades five through twelve do not perform the weekly requirement of vigorous activity needed to maintain an effectively functioning cardiorespiratory system". (41)

A study of Australian children also shows relatively low levels of activity, especially activity of an intensity necessary to promote cardiovascular health benefits (Australian Health and Fitness Survey, 1985). A questionnaire was used to find out how much physical activity children had done in the previous week both in and out of school. Approximately 30 percent of all students under the age of twelve had done no school sport in the week proceeding testing.

Children were asked "in most weeks do you get exercise or activity 3-4 times which makes you huff and puff and lasts at least 30 minutes each time?". Using the criterion, 50 percent of the boys and 61 percent of the girls were doing insufficient aerobic exercise.

Baranowski (1987) concluded from his observations that children are active, but for short spurts rather than for
the longer stretches that might be expected to have an aerobic training effect.

A similar conclusion was drawn from data collected in England (Dickenson, 1985). The sample size for this study was quite small (311) with the age range being eleven to sixteen year olds. This study used interviews in addition to self-report data to assess levels of activity. Both of these methods produced similar results.

The findings of this study provided evidence of a lack of appropriate physical activity for the majority of young people. The questionnaire results indicated that over the week that was studied, between 80 to 85 percent of the children did less than five minutes vigorous activity on any day.

These results were verified by the interviews which showed that 83.1 percent of the sample were inactive during the week and 82 percent were inactive at weekends.

Other studies carried out in the United Kingdom have shown similar results to Dickenson. Exeter University's Physical Education Department studied a group of twelve to sixteen year olds, collecting information on their activity patterns with activity diaries. They found that children
exercised 'vigorously' for an average of only six minutes daily.

Similar drawbacks are true of a study by Mckusker (1985) on the involvement of fifteen to nineteen year old young people in sport and physical activity in Stirling. This study also suggested that activity levels in youngsters are relatively high.

The use of questionnaires with children does have limitations, and it has been suggested that activity diaries may provide more reliable results. A number of studies have actually used both a questionnaire and diaries to determine the activity patterns of children in an effort to ensure that results are more accurate i.e.


One such study was that carried out by Shephard et al (1980) on a group of children in Quebec. On two separate occasions (March and September) children were asked to
complete a twenty four hour diary for a typical Wednesday and a typical Saturday.

The results showed that vigorous activities accounted for only 1.2 hours per day of diary time in the boys, and 0.9 hours per day in the girls.

One aspect of the results which is very clear and in agreement with the findings of many other studies in this area is the fact that boys were found to do more vigorous activity than girls.

Huenemann et al (1967) also used the diary method in their analysis of children's activity patterns. Many people who have suggested that children are inactive have implied that this is a relatively recent phenomenon, coinciding with many technological and cultural changes. However, the results of this study appear to show that teenagers have in fact been inactive for many years, with technological advances having an effect even in the 60's.

The results from this study again illustrated that contrary to popular belief, teenagers are relatively inactive. For the mean of the four weekly periods, the girls spent more than 95 percent, and the boys over 90 percent of their time in sleep, very light and light activity.

They may genuinely believe that they are doing a
sufficient amount of exercise, and thus may well disregard
any attempts to try and encourage their increased
participation believing that they are one of the few
individuals who are already doing enough activity.

Another study carried out in 1967 (Durnin, 1967) also
found relatively low levels of activity among children,
particularly girls. All activity was arbitrarily divided into
three categories: moderate, heavy and very heavy.

The results showed that vigorous activities accounted
for only 1.2 hours per day of diary time in the boys, and 0.9
hours per day in the girls. One aspect of the results which is
very clear and in agreement with the findings of many.

Based on these categorise, 13-15 year old boys were
found to spend 29 minutes per day in heavy physical activity
and 12 minutes in very heavy activity. The corresponding
figures for 13-15 year old girls were only 10 minutes in
heavy activity and 3 minutes in very heavy activity.

Taking these limitations into consideration, it is still
possible to see that the levels of vigorous activity for these
children were fairly modest. The girls in particular were
only doing 3 minutes of very heavy exercise per day.
A by Williams (1988), examined adolescent physical activity outside school using a self completion questionnaire. A sample of 921 fourth year pupils from six different schools was studied. Questions were asked about participation in physical activity outside school and also about attitudes to aspects of physical education.

An analysis of the results showed that just over half (52%) of the sample claimed to take part in some form of physical activity outside school. In agreement with the results of previous studies, Williams found that more boys than girls participated in physical activity outside school, and that boys tended to be more frequent participants than girls.

Williams concludes from her results that in terms of outside school activity, the majority of pupils exercise insufficiently frequently to contribute to the maintenance or enhancement of health, with only 26% taking part in physical activity more than once a week.

Verschuur & Kemper (1985), investigated the habitual physical activity and health of thirteen and fourteen year old teenagers in the Netherlands. The results were collected over four years using three methods of data collection.
(a) Heart rate monitor.
(b) Pedometer.
(c) Questionnaire and interview.

The absolute level of habitual physical activity was difficult to determine, but it was found that a median of 480 minutes per week in boys and 421 minutes in girls were spent doing activities of an intensity greater than 5km per hour. This suggests that the teenagers were quite active, but this level of activity is modest, and may not be sufficient in terms of health enhancement. A breakdown of the results again showed a marked difference between boys and girls, with boys not only spending more time on activity than girls but doing more strenuous activities.

Thus, there is evidence that boys spend activity time more energetically than girls. The results also showed that there was a steady decrease in daily physical activity from twelve to eighteen years. This trend was common to both boys and girls.

Gilliam (1981), Saris (1980), both undertook studies which showed contrary results to the previous study. They
both studied younger children than did Verschuur and Kemper, and it would be reasonable to expect that the activity levels would be higher than that of teenagers. However, they both found that activity levels were insufficient and that activity intensity of very young children were not sufficient to maintain heart rates high enough for cardiovascular health.

The findings of MacConnie (1982), substantiated the findings of the previous studies summarised, and concludes that children spend more time in low, moderate activity, and little, if any, time in the high intensity activity necessary to improve health and fitness.

Seliger's (1974), study of the habitual activity of 12 year old boys was another study which used a heartrate counter to identify activity patterns. The study looked at eleven to twelve year old boys and found that only three percent of their time was spent in activities of a moderate or medium intensity and at no time did the boys engage in 'heavy intensity' activity. Thus, Seliger concluded:-

"all of the subjects in the sample exhibited a sedentary lifestyle." (42)
This may provide even further evidence that the youth of today are not doing sufficient amounts of 'appropriate' physical activity to maintain and enhance health. This point was substantiated by Migashita et al (1983), who confirmed this point of view in their study of physical activities of nine to ten year old boys living in Tokyo. It was found that:-

"the duration of daily exercise of the ordinary boys living in Tokyo is too short to develop cardiopulmonary functions at their utmost."(43)

Saris (1985), reinforces the last studies and states that in general, boys are more active than girls, and a decline in activity levels with age can be detected in both boys and girls.

More recent research then, establishes that there has been much concern that the physical activity levels of children have decreased in the past 30 years. This is particularly worrying given the increased evidence that physical activity alters risk factors for some chronic diseases, some of which can persist throughout childhood, and adolescence.(Montoye, 1985; Saris, 1985; Wilson, Paffenberger, Morris & Havlick, 1986.)
or as Morris 1988 puts it :-

"For lack of exercise we are bringing up a generation of children less healthy than it could be and many of whom are likely to be high risk in later life of serious diseases and shortened life expectancy."(44)

Research evidence then quite clearly justifies the need for children to be active and adopt an active lifestyle as part of their daily routine.

In a study by Seliger, Tefny, Bartunkova and Power (1974), a heartrate counter was used to identify physical activity patterns of 11-12 year old boys. The subjects were also interviewed personally. It was found that only 3% of the boys time was spent in activities of a moderate or medium intensity, and at no time did the boys engage in 'heavy intensity' activity. Seliger concluded that :-

"all of the subjects in the sample exhibited a sedentary Lifestyle."(45)
A survey carried out in Australia (The Australian Health and Fitness Survey, 1985) reported relatively low levels of activity in children, especially activity necessary to promote cardiovascular health. A questionnaire was administered to determine how much physical activity children had done in the previous week, both in and out of school.

Approximately 40% of students at that age of twelve had engaged in no school sport in the week proceeding testing. The percentage increase was 49% for boys and 51% for girls at fifteen years. Furthermore, more than one in five boys and one in four girls had not done any activity at all outside of school in the previous week.

Findings from the study suggested that there were significant differences in physical activity and sports participation by age, sex, and country. Analysis revealed that the proportion of children reporting that they were not physically active was in the higher age groups.

Kannas, Tynjala, Aaro and Wold (1986) collected data on activity levels in children from four countries (Australia, England, Finland and Norway) using self completion Questionnaires. The target groups for the study were children 11.5, 13.5, and 15.5 years old. The first set of data
was collected in 1983/4 and a follow up study was carried out in 1986.

The study was concerned with only leisure time physical activity, thus any exercise children experienced during the school day was excluded. Results showed that overall 61% of the eleven year olds and 50% of the 15 Yr olds took part in physical activity one to six times per week.

In 1987 a National Survey was carried out in North America (The National Children and Youth Fitness Study, McGinnis, 1987.) A self report method on a large sample of 10 to 17 year olds revealed levels of insufficient activity among children :-

"Probably half of the American Children in grades five to twelve (10-18 year olds) did not perform the weekly requirement of vigorous activity needed to maintain an effectively functioning cardiorespiritory system."(46)

The Northern Ireland Fitness Survey (1989) represents perhaps the most comprehensive data available on British Youth. The survey measured the fitness, physical activity levels, attitudes and lifestyles of 3211 post-
primary school children. Physical activity levels were measured by means of a lifestyle questionnaire.

To summarise the results, 32.7% of boys and 34.4% of girls reported that they had done no exercise outside of school during the preceding 7 days. The rate of decline was similar in both sexes, but in regard to vigorous activity, the decline was greater in girls than boys.

In 1989, a study on the fitness and activity of English School Children was produced as part of the Coronary Prevention in Children Project. (Armstrong 1989). The project determined the cardiorespiratory fitness and physical activity levels of over 200 children aged 11-15. Armstrong used heart rate measures to estimate the physical activity levels of children, who were monitored for a minimum of three weekdays and a Saturday.

The results produced by Armstrong similarly showed children to be inactive. Fewer than 15% of the girls and 30% of the boys achieved a single 20 minute session with their heart rate over 139 beats per minute over the 3 days.
To summarise, it would be difficult to draw comparisons between so many different studies which used differing methods of collecting data, and the varying ages of the children studied. However, a few basic conclusions could be reached:-

(1) Children today would not seem to be as active as we would think.

(2) That they are not participating in the 'appropriate' type of activity with enough intensity for the maintenance of health.

(3) Some studies seem to show that children are sufficiently active, but these studies do not seem to show any classification of the intensity of exercise.

(4) There seems to be evidence to indicate a decrease in activity levels with age.

(5) The difference between the activity levels of boys and girls; with boys doing more appropriate exercise than girls at a higher intensity.

The information available on activity levels in the secondary age range is limited. Firstly, the studies have adopted a number of different methods of approaches to measuring physical activity levels, ranging from physiological, mechanical, self reporting, including diaries,
questionnaires and interviews, to a combination of methods. This makes any real comparison between the various studies very difficult.

However, despite such problems associated with the activity information, it does seem that, on the basis of the findings of the majority of the studies, children of secondary school age are not active enough.

It would seem from reviewing the literature on the activity patterns of young people that children are perhaps not as active as we would think, and if this is so, not only does it have serious connotations for their future health, but also asks the question; 'what' should we be teaching in the physical education programme? As Rowland (1990), puts it;

"The story of fitness and physical activity and their influence on children's health is largely incomplete. Interpretation of testing results, implications connecting activity and health and therapeutic interventions are being based on assumptions that do not always bear up to close scrutiny. Present information suggests an important role for exercise in children's health, but effectively guiding youngsters into active lifestyles will require a much
greater scientific foundation than is currently available."(47)

2.7. Summary

In Summary, the review of literature, indicates that there are pertinent areas in the study of children's attitudes towards physical activity and physical education. Taking into consideration the early attempts to establish an instrument to measure such attitudes, these areas seem to be, the physical education curriculum, the teacher, pupils perception of themselves, and the activity patterns of young people. The next chapter aims to clarify the methods and procedures used throughout the study.
CHAPTER THREE.
3.0. PROCEDURE AND METHODOLOGY

3.1. INTRODUCTION

There is evidence from the review of literature that exercise is considered important for health. There was also evidence that all children do not develop positive attitudes to exercise through their experience of school Physical Education.

A number of key issues have been identified for these negative attitudes including teaching and watching competitive games in the Physical Education programme (Hendry, 1978), particular striving for competitive success and attendant rituals.

There is also evidence that lowered self esteem can result from negative experiences in school Physical Education and that this can be related to negative feelings towards exercise (Thomas, 1978).

Other influencing factors included the role of the teacher (Hendry, 1978) and how he was viewed by the pupils, with additionally the type and range of activities taught in the curriculum (Mussloch, 1987).

Much of the literature was concerned with the study of adolescent boys, and students in college, with a great amount
of research related to girls and women; which is not surprising as they have a notoriously poor drop out rate in the Physical Education programme. It was therefore decided to examine the attitudes of boys in the first two years of secondary school.

In line with evidence arising from the literature, direct reference was to be made to attitudes to P.E. and P.A. but in addition information pertinent to attitudes to the P.E. teacher and self image were to be assessed.

3.1.1. THE SCHOOL AND CHILDREN USED.

It seemed from the review of literature that the lower end of the secondary school had not received enough scrutiny, where it could be argued that it is at this age range in boys, that unfavourable attitudes may be consolidated. The problem was to locate a school where the author could observe this age group and view a typical range of abilities.

The option as to whether to compare high academic pupils from a grammar school or low ability pupils from a non-selective school was considered, but then discounted on the basis that the importance of retaining environmental consistency was paramount.

The author needed to locate a school which was
co-operative and which had a range similar to his own school. The authors' own school had a typical range of academic ability, but it was decided could not be used as variables such as knowing the children personally could have affected data collection.

Because of these factors it was decided that a comprehensive school would offer the wide range of ability, with children from differing social-economic and intellectual backgrounds, in order to provide a reasonable social spread. It was felt that this would meet the needs of the study and be of more relevance to teachers in general. In addition to this the school was very similar in context to the author's own school which gave purpose at a personal level.

Within the sample of boys there were pupils that came from 'better' backgrounds where there could be favourable attitudes to education in general, P.E. and P.A. and also pupils from 'poorer' backgrounds who might be expected to have negative attitudes.

For this reason the study would be descriptive of this type of school, and not like a grammar school, which may have little variation in the background of the pupils.
SAMPLE SCHOOL

Because of the criteria outlined previously one school only was used in the research, which was a typical comprehensive school on the outskirts of a Northern Town. The names used in the text (Northfield Comprehensive School, children and staff) are all fictitious to protect the anonymity of the people who helped me in the study. Northfield Comprehensive school is a co-educational 11-16 comprehensive which had an Education Priority area designation. There are fifty two full time members of staff, who gave me every assistance possible. The school offered the environment and type of P.E. programme necessary to undertake such research, and in the author's opinion was quite typical of schools of this type.

The author worked closely with several departments, especially English and Special Needs. The Physical Education Department were exceptional in their help and enthusiasm which was enhanced by nonspecialists who helped in the department with occasional lessons and extra curricular teams.
SAMPLE PUPILS.

It became apparent quite early on in the study that the feasibility to use normal questionnaires with lower ability boys of this age would present a problem. This led to a significant part of the procedure of the study becoming the design and issuing of a questionnaire capable of assessing attitudes across the range. For this reason a 120 boys were used from years 1 and 2 to pilot questionnaires during their development.

A full range of academic ability was used at this stage. The final study which can be viewed as the major test procedure was carried out using 20 boys from the highest academic band and 20 boys from the lowest academic band. The selection of these boys had been previously done by the schools normal setting procedure.
3.1.2. OBSERVATIONAL ENTITIES

The review of previous research into attitudes indicated that existing attitude scales and inventories (e.g. Roach, 1965, Kenyon, 1968, Eddington 1968) had been used largely with older pupils and adults. It was therefore decided to use questionnaires and extended interviews recorded on tape as the main means of collecting data, as even the use of a simple questionnaire became problematic. The second procedural problem therefore, was what would be the best means of studying the attitudes of 11-13 year old boys?

It was decided that using a relatively large sample for the questionnaires would have some advantages, but using a smaller sample and scrutinising in depth would be preferable. Whereby these three methods of data collection could provide the best means of gaining information, which would allow some cross-checking in terms of reliability and validity on data returned. The use of three forms of attitude assessment allows for some cross referencing regarding validity, but also provides a clearer picture of the processes occurring.
3.1.3. OBSERVATIONAL FIELDNOTES

This method of data collection was particularly relevant as a proportion of the research period was involved with observation of the pupils in the lesson periods; both in P.E. lessons and classroom based lessons. It was assumed that only through hours of observation could a feeling of what it was like to be part of the class be ascertained, and a record made of the differing relationships.

In addition the author saw this interaction as vital in order to try and generate trust with the children, and to ensure honest and open responses in collecting data. This took time and approximately 5 weeks were spent in school in this capacity to try to ensure that the observations made were as near as possible 'natural'. During this time a diary was kept and observations recorded, with the intention of using the documentation later to support the results from the Brainteaser Questionnaire.

More specifically a diary was kept with the intention of giving the author:

a) A clear understanding of what was happening in the school.
b) Relationships that existed between peers.
c) Relationships that existed between pupil and teacher.

Weeks 1 to 3 were involved with general observation, but in weeks 3 to 5 50% of the time had to be allocated to the more specific task of developing Pilot Questionnaires. However, during a second 5 weeks there was a small amount of time allocated to the formalised observation of the sample groups, plus incidental observation during the interviews, and the issuing of questionnaires. It was felt that the diary would allow for a general description of:-

(a) The School.
(b) The Pupils.

A typical day from weeks 1-3 in general observations, weeks 4-5 in production of the pilot questionnaires and weeks 6-10 in specific observations and interviews, can be found as appendices 6-8.

3.2. DESIGN OF QUESTIONNAIRES

The use of questionnaires was seen as providing a quick, easy and efficient means of collecting data. Although in reviewing the literature, no previously constructed questionnaire seemed suitable for the purpose of this research, which dealt with lower band 12 year old boys.
Consequently Pilot One was developed. Modifications were made to already existing questionnaires (Basic questionnaire structure Abel & Knapp, 1967; with Likert Scale, Wear, 1952; adaptation) and were presented to a sample of 1st and 2nd year pupils (12 in number) as pilot 1.

3.2.1. PILOT ONE

This first instrument was issued as a pilot questionnaire to a small group of 12 year olds (12 in number). The means of responding to the questions were as follows:

3.2.1.1. (a) Section One

The children had to respond by means of ticking a certain face which would represent their own in response to the statement in the question i.e. How do you feel when it is time for your P.E. lesson?

3.2.1.2. (b) Section Two

The boys had to respond in this section by writing a sentence or two in response to a pre-determined statement. This was the only section which relied on 'open' questions. i.e. Why do you think that you do P.E. in school?

3.2.1.3. (c) Section Three

In this section the pupils had to respond by means of ticking a YES or NO box in answer to each question. i.e. Do you enjoy working with your friends?
3.2.1.4. (d) Section Four

The boys had to answer questions in this section by means of circling a number on a Likert scale from 'strongly agree' to 'strongly disagree'. i.e. P.E. helps you keep fit?

After the initial 'run' with a sample of twelve children, the following points were noted as being faults in the design, and should be changed for the second pilot questionnaire.

The faults in the instrument were detected by discussion with the boys in the sample, and general observations whilst the pupils were filling in the questionnaire.

1. Open questions were not effective in collecting information from low ability children.

2. The questionnaire was too long which resulted in children getting bored before its completion.

3. Likert type questions were found uninteresting by the pupils, and even with explanation, the pupils tended to answer the question to the total positive or the total negative.

(A group of three researchers pooled evidence from previous work) On analysis of the questionnaire and in discussion with the children, it seemed apparent that there were certain factors which were wrong in content of the instrument:-
a) Too long. Many of the children began to lose concentration by the end.
   a) Likert scale not correctly understood.
   c) Too many open questions.

3.3. PILOT 2

From the information gained from pilot 1, a second questionnaire was developed with a different sample of 1st and 2nd year pupils n =100. This questionnaire had:-

(a) Less open questions
(b) Simplified Likert scale
(c) Not as many questions

Other researchers who were working on a similar area of study within the Health Based Project based at Loughborough University used the 2nd questionnaire with girls in a secondary school setting and it was found to be appropriate. Again there were problems, with the questionnaire seeming to be too long and the language too complex for boys of this age group and ability set. It therefore, appeared at this stage in the research that the extended interview procedure was perhaps the only real method of data collection relevant and effective in this setting. This was unfortunate in that the children did seem to be attracted at first to the questionnaire and were intrigued
by "filling something in". In addition it did provide a quick and effective means of gathering data for research purposes. Furthermore, questionnaires do provide a reliability check with an interview procedure, which would be of benefit when working with pupils in this ability set.

This was an important stage in the research procedure as it seemed that the author would have to abandon the idea of using a questionnaire, relying on the proven tool of the extended interview procedure. However, the author was not willing to give up the concept of developing a questionnaire for use with pupils from this ability set and age range. He felt very strongly that there was a need to develop a questionnaire which overcame the problems highlighted in the pilot studies, and capitalised on the interest factor of the children in "filling something in". It was at this stage that the author, (out of both interest and necessity) wanted to explore the possibility of developing a questionnaire which had an ease of use, and would gather as much information as the interview procedure.

The two pilot studies to date had confirmed the author's opinion that the four dimensions reflecting attitudes should be retained and could be measured. i.e. the boys seemed equally able to answer questions based on :-

a) The pupils' perception of themselves.

b) The pupils' perception of the P.E. teacher.
c) The pupils' perception of the P.E. programme.

d) The pupils' activity patterns.

These four key areas were seen as being the basis for the categories in the test questionnaire and interview schedule.

3.4. DESIGN AND ADMINISTRATION OF THE INSTRUMENT

The development of a questionnaire was deemed as being a relevant method of collecting data. The next stage was to construct questions pertinent to the four sections. In doing this, three researchers pooled information from previous work which related to secondary girls perceptions of physical education, primary school children's perceptions of physical education and secondary boys perceptions of physical education. This was achieved by writing over 70 questions and then breaking these down to 37 made up of:

i) 9 questions in section one related to the pupils self image.

ii)10 questions in section two related to the P.E. teacher.

iii) 8 questions in section three related to the P.E. programme.

iv)10 questions in section four related to general aspects of Physical Education and Physical Activity.
It has already been stated that it was at this stage that the author had a dilemma in respect of which methods of data collection to use. It seemed increasingly likely that the main research tool would be that of the extended interview, but the author was determined to develop a questionnaire for use with such ability set boys.

This added another dimension to the area of concern, with the development of such a questionnaire now becoming a priority. It would not have to be based on previous ones and the way in which it was laid out would have to be 'unique' and relevant to aspects of the pupils own experience. The author decided that if he could retain the interest of the pupils the questionnaire format should be appropriate. It seemed logical to use the information collected on pastimes of pupils from the two pilot studies to help focus attention, but clearly this would require a quite imaginative approach to questionnaire design. In this respect the authors work diversified from the previous more conventionally constructed questionnaires.
3.4.1. DEVELOPMENT OF THE BRAINTEASER QUESTIONNAIRE

The information that arose from the pilot questionnaires substantiated by the review of literature, was that many pupils are involved in pastimes in their spare time (Fig 1), rather than organised physical activity. These pastimes, for this sample of children included such activities as:

(a) Computers, Videos, T.V.
(b) Snooker, Darts.
(c) Pool, Bike Riding. (See Appendix 1, Fig 1).

This is reinforced by Hendry (1993) in his book 'Young People's Leisure and Lifestyles', when he states:

"The children were also asked about a wide range of other leisure activities they pursued on a weekly basis. Hobbies and the watching of television and videos are the main preoccupation."(48)

It therefore, seemed viable to include in the final questionnaire categories analogical images based on these areas of interest, as a means of responding to the questions. Therefore, a questionnaire was devised which had the
following four sections.

3.4.1.1. SECTION ONE

The symbol used was a snooker table, whereby each pocket represented a response to a general statement in relation to what the pupils felt best suited their character. (Appendix 1, Fig 2).

3.4.1.2. SECTION TWO

The symbol for response used in this category was a figure of a man climbing a stairway (Appendix 1, Fig 3). Five steps represented a likert type scale from 'happy to sad'. The purpose of this was to represent in pictorial form a means of answering that would be more easily understood by the boys than a typical likert scale on a horizontal plane.

3.4.1.3. SECTION THREE

The symbol for response used in this category was a dart board, where the pupils had to make an 'X' on a yes/no/not sure system of answering. It can be noticed from the diagram that there was two answers for each response. (Appendix 1, Fig 4).

3.4.1.4. SECTION FOUR

The symbols used in this section was that of a cartoon strip, where the pupils had to respond by means of saying which person in the picture most represented themselves in the same situation. (Appendix 1, Fig 5).

The development of this questionnaire was very
significant in the collection of data as it was specifically designed with ideas from the boys themselves.

One of the results from the pilot questionnaires indicated that they did not find completing the questionnaires interesting, and with this in mind the Brainteaser was developed. The pupils made comments after filling in the questionnaire which justified this such as:-

"I really liked it."

"I enjoyed filling in the questionnaire, I even coloured in the cartoon strip at the end."

On several occasions this was reinforced by pupils adding their own ideas on the Brainteaser, such as drawing the man climbing the stairs doing a handstand rather than walking.

These direct responses of the children clearly indicate that the Brainteaser had overcome the problems of :-

(a) Boredom

(b) Difficulty in completing it in full.

It was at this point that the author felt confident that the Brainteaser would produce results which were far more accurate than previously designed questionnaires, with pupils finding it more interesting to complete. Therefore, the Brainteaser was administered to the total test sample.
3.5. INTERVIEW PROCEDURE

The key questions set for the interview were developed from sections relating to parts of pilot one, pilot two and the Brainteaser questionnaires.

It was decided that a formal interview would be the best method of gaining as much in depth information as possible, in support of the Brainteaser Questionnaire.

The pupils were interviewed in two separate locations; one in the main school and one in the lower school. The location in the main school was an office fully equipped with desks, chairs and electrical sockets for the use of audio tape connection. Whilst the location in the lower school was a converted classroom which was larger in size and had windows on three sides.

There were certain practical considerations that had to be considered in respect of the actual recording on tape.

1) The surroundings should be warm, comfortable and quiet.

2) That the pupils should be given an introduction of the topic or topics to be covered; the probable length of time it was going to take and promises of anonymity.

3) To acquaint the person honestly and clearly with what you are asking him to do.
The interviews were conducted by myself and a research colleague who followed exactly the same procedure. The tapes were filed and later transcribed. During the interview each candidate was given a number and code which were recorded on files. Also during the interview a file was provided for the interviewer to add written comments about the candidate if necessary. (To be found as appendix 5)

Because the interview was used in part to set the pupils at ease, to provide general background information to the study as well as assess attitudes; two experienced researchers only transcribed those parts of the text that was seen as relevant to either the four categories being assessed or information pertinent to understanding that particular individual.

It was impossible to interview boys in a way which disguised which category each came from. Thus the interviews might well have been affected by expectations of the child. Even so attempts to overcome this problem would have been made if the author had not considered that responses to the interview questions would have indicated disagreement.

The transcripts of the interviews were then interpreted on a scale that matched a scoring system on the Brainteaser by two independent teachers. These teachers did not know the
band group of the respondent. The fact the experienced researchers included all references to the four categories of attitude, but were not asked to evaluate those statements, enabled the author to present transcripts to independent assessors with no indication of the academic ability of the pupils. The statements were typed, with no indication from writing or spelling, but perhaps a little from the grammar used, (See Appendix 9)

Two independent assessors, experienced teachers, 1 male 1 female were then asked to make an assessment of each subject on the basis of this information. The exact scoring system is outlined in the next section, which is based on a -7 to +7 scoring scale. The interviews and the Brainteaser were presented to each subject within 1 week but never on the same day. (Attempts to control time or day, or standardise antecedence were impossible within constraints of school practices).

3.5.1 FOLLOW-UP INTERVIEWS WITH SPECIALLY SELECTED CHILDREN.

Follow-up interviews were designed to encourage the children to talk more freely about their interests in physical education and physical activities and about the things that encouraged this interest. This enabled the author to gain a
general feel and make more detailed observations about specially selected pupils who may have 'behavioural problems' or be 'gifted'.

3.6. VALIDITY AND RELIABILITY

Self-report instruments have been used extensively in the measurements of physical activity and Physical Education. Many investigators however, have concerns about the accuracy of such measures (Baranowski, 1985; Bernard, Killworth, Kronenfield, & Sailer, 1984; Powell et al, 1987). If any conclusions are to be drawn from the results of studies which have measured physical activity using self reporting techniques, and if any initiatives in the way of intervention strategies are to be implemented on the basis of such results, then it is important that the techniques used are reliable and valid.

Validity refers to the extent to which an instrument measures what it is supposed to measure. Reliability refers to the consistency and whether two administrations of an instrument produce the same result. An instrument which is reliable however, is not necessarily valid. Whilst studies have been concerned with assessing the reliability and validity of self-reporting measures of physical activity, the situation is,
unfortunately not as simple as it may first of all appear. It is complicated further by the fact that there are problems in conducting reliability and validity studies and the most appropriate way to assess validity and reliability is not really known. In the case of studies of validity, for example, there are no methods with almost no error against which to assess self reporting activity. Observations provide one possible method (Baranowski et al; 1984), but it could be argued that there are problems inherent with observational procedures themselves.

Other problems associated with the reliability and validity checks include the population to which the instruments have been applied differing across studies. This makes it difficult to compare coefficients across studies and generalise the published values. The most appropriate way to assess validity and reliability is not really known. In the case of studies of validity, for example, there are no methods with almost no error against which to assess self reported activity.

Other studies by Wallace, Mckenzie, & Nader, 1985, into the exercise recall concluded that many children did not have the memory capacity for a 7 day recall, but that it was a reliable tool to use with college students.
Mundal, Erikssen & Rodahl (1987) conducted a study which aimed to check the validity of an assessment of habitual physical activity, based upon a standardised questionnaire, against the results of a personal interview. The results of this assessment were then to be compared with the actual level of physical fitness of each individual as shown by a cycle ergometer test.

The physical activity levels of the two populations during leisure hours were then reported. The results revealed that the physical activity questionnaire yielded totally different results in the two populations studied. In the sedentary group, the correlation between the answers given in the questionnaire and the rating by the investigator conducting the interview was fair. However, the answers the officers gave to the questionnaire were at great variance with the interview data. As Cale & Almond (1991) states:

"This study serves to illustrate the fact that different individuals or groups of individuals may interpret or comprehend the questions quite differently and serves to illustrate how cautious one must be when attempting to establish levels of physical activity on the basis of questionnaires." (49)
The author being aware of this has made an attempt to assess the value and accuracy of the Brainteaser Questionnaire by asking two colleagues to read interview transcripts and rate the response of each pupil on a scale of -7 to +7, and compare the results from the two quite different tests to see the measure of agreement. If a degree of agreement is seen across the assessment there would seem to be a likelihood that this is a genuine reflection of reported attitudes.

Although the major focus of a number of researchers work has not been the reliability and validity of physical activity measures used as such, they have nevertheless addressed the issue in their studies recognising it to be a concern of considerable importance when dealing with the monitoring of activity levels. Tests of reliability and validity have therefore been incorporated into a number of studies. (Cauley et al, 1987; Baranowski, 1990).

It is clear from these two studies that such reliability and validity tests, can result in error of such self reporting measures of physical activity. The major sources of error are identified as being the definition of the desired variables and human cognitive processes. Haskell (1985), has pointed out that the physical activity stimulus has not been clearly defined to achieve health related outcomes.
The existing literature has revealed evidence of several sources of cognition related error such as memory delay, recall, primarily of rare events and planned activities, and lack of motivation in self-form completion. This last point the author was very aware of from the outcomes of the pilot questionnaires in which the language and basic lay out of the questionnaire was seen as not stimulating for the pupils, hence the pictorial images developed in the 'Brainteaser Questionnaire.'

It is evident from the work done on validity and reliability that there are a number of problems associated with measuring physical activity in general, but more problematic when dealing with children. Indeed an article by Johnson and Foley, 1984, highlights this when they consider the reliability of children's memories. A set of common assumptions are made about children's memories which state briefly that when compared with adults, children are believed to notice less, omit more, forget faster, be more susceptible to suggestions and especially to intermingle imagination and perception in remembering. The implications these assumptions have in terms of attaining an accurate recall of physical activity are evidently highly significant.
3.6.1. Summary

To summarise, it would appear that self-reporting instruments have been extensively used in the measurement of physical activity. There have been problems with reliability and validity and these have been highlighted by researchers such as Baranowski (1984).

The author has attempted to highlight problems with children interpreting questions differently, lacking memory, and being susceptible to suggestions. This was felt necessary in trying to offer the 'Brainteaser Questionnaire' as a possible instrument for data collection with youngsters in the first two years of the comprehensive school. In the case of this study, a direct comparison was made between the interpretation of the two teachers and the Brainteaser to assess the validity of the measures.
3.7. RELATIONSHIP OF BRAINTEASER TO INTERVIEW ASSESSMENT.

Debate has always raged about the value and the validity of questionnaires and interview procedures. To examine this relationship a number of other comparative procedures were used.

One major criticism is the ability of readers to interpret transcripts with accuracy. To test this, two experienced teachers were asked to rate the responses of pupils to the Self-Image, Attitudes to P.E. Perceptions of the P.E.: Teacher and Activity Patterns questions in line with the scoring system of the Brainteaser.

Clearly as high correlations were not achieved between the two judges, and to ensure confidence of the Brainteaser questionnaire to judge attitude and behaviour, several assessment procedures were employed. First the Brainteaser was compared with the two judges separately.
Comparative Scores can be seen (Table X)

<table>
<thead>
<tr>
<th></th>
<th>Brainteaser/Teach X</th>
<th>Brainteaser/Teach Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity Patterns Upper Band</td>
<td>0.67</td>
<td>-0.05</td>
</tr>
<tr>
<td>Activity Patterns Lower band</td>
<td>0.79</td>
<td>0.58</td>
</tr>
<tr>
<td>Self Image Upper Band</td>
<td>0.72</td>
<td>0.75</td>
</tr>
<tr>
<td>Self Image Lower Band</td>
<td>0.8</td>
<td>0.42</td>
</tr>
<tr>
<td>Perceptions of P.E. Upper band</td>
<td>0.6</td>
<td>0.63</td>
</tr>
<tr>
<td>Perceptions of P.E. Lower Band</td>
<td>0.22</td>
<td>0.66</td>
</tr>
<tr>
<td>Perceptions of Teacher Upper band</td>
<td>0.44</td>
<td>0.56</td>
</tr>
<tr>
<td>Perceptions of Teacher Lower Band</td>
<td>0.56</td>
<td>0.12</td>
</tr>
</tbody>
</table>

Table X: Comparative Scores of Teachers

It is interesting to note that teacher X on two occasions does appear to score less favourably than teacher Y.

In terms of the result for the Activity patterns the author feels that the change in the method of response from an "adapted" Likert scale to a cartoon strip caused some confusion on the part of the children particularly in the upper band and this can be supported by evidence from the pupils' scores on the Brainteaser.

The other result in terms of the Perception of the Teacher by the lower band boys supports the notion, (which was pointed out in discussion on the transcript information) that some of the pupils in the lower band did not make as many negative or derogatory comments as they did in the Brainteaser Questionnaire. This could be because the pupils did not want to answer in such a negative way whilst confronted
with someone in person i.e. the interviewer.

To test inter-judge correlation a Pearson's Product Moment Test was used. The rho scores for each sub-category are presented in table Y.

**Correlations for Teacher X and Teacher Y**

<table>
<thead>
<tr>
<th>Sub-category</th>
<th>Combined Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity Patterns Upper Band</td>
<td>0.21</td>
</tr>
<tr>
<td>Activity Patterns Lower Band</td>
<td>0.53</td>
</tr>
<tr>
<td>Self Image Upper Band</td>
<td>0.52</td>
</tr>
<tr>
<td>Self Image Lower Band</td>
<td>0.32</td>
</tr>
<tr>
<td>Perceptions of P.E. Upper band</td>
<td>0.56</td>
</tr>
<tr>
<td>Perceptions of P.E. Lower Band</td>
<td>-0.16</td>
</tr>
<tr>
<td>Perceptions of Teacher Upper band</td>
<td>0.03</td>
</tr>
<tr>
<td>Perceptions of Teacher Lower Band</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Table Y: Combined Teacher Scores

The correlations achieved are not high, but 5 of the 8 are significant at the 0.05 level, 3 of the 5 are significant at the 0.01 level. Clearly the teachers are capable of making same judgments with some degree of accuracy, but at this stage it is difficult to explain the problems assessing lower ability perceptions of P.E., Pupils' Self Image and upper ability Activity Patterns.
Because Teachers possess different interpretation skills and this could be a factor in this form of study, it was felt it would be wise to test the Brainteaser against the combined scores to see if this offered greater strength to the calculations. It is accepted that some reservations have to be expressed in the areas where insignificant correlations were achieved. (The combined scores may however strengthen the predictiveness). The rho attained from the sub categories is shown in table Z.

Correlation Brainteaser / Combined Scores

<table>
<thead>
<tr>
<th>Activity Patterns Upper Band</th>
<th>Brainteaser/Combined Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity Patterns Lower Band</td>
<td>0.78</td>
</tr>
<tr>
<td>Self Image Upper Band</td>
<td>0.75</td>
</tr>
<tr>
<td>Self Image Lower Band</td>
<td>0.69</td>
</tr>
<tr>
<td>Perceptions of P.E. Upper band</td>
<td>0.7</td>
</tr>
<tr>
<td>Perceptions of P.E. Lower Band</td>
<td>0.74</td>
</tr>
<tr>
<td>Perceptions of Teacher Upper band</td>
<td>0.73</td>
</tr>
<tr>
<td>Perceptions of Teacher Lower Band</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Table Z : Brainteaser / Combined Scores

It can be seen from these results that 6 out of the 8 correlations have a score of 7 or above and indeed 7 out of the 8 are significant at the .01 level. The one score of .39 broke the pattern of general agreement. This again could refer to previous results which would suggest that responding to a neutral Brainteaser, children were more discrete than when
answering questions asked by an interviewer.

The interview could well have caused the children to moderate their views a little, whilst some of the children may have moderated their view considerably. This added to the fact that the teachers clearly found it difficult to agree on the transcript information may lead us to assume that in this form of question the more neutral Brainteaser may be more suitable.

3.7.1. Summary

At the procedural level it would appear that the Brainteaser is correlating quite well with the more experienced teacher assessor, and in fact retaining concordance on most factors when compared to the combined scores of teachers, it has considerable validity. It follows then, that the Brainteaser might be reasonable used in isolation as a broad predictor of these categories of attitude and behaviour, and in combination with interviews would give confidence in interpretation.

The following chapter is a presentation of the results arising from both the Brainteaser Questionnaire and the extended interviews.
CHAPTER FOUR

4.0 ANALYSIS OF RESULTS

4.1. INTRODUCTION.

Whilst in the procedure conventional questionnaires were used to elicit information about attitudes and activity levels the results of these questionnaires seemed inadequate (see procedure) and therefore, for the purposes of the results only the information elicited from the Brainteaser (described earlier) and the interview transcripts are included in the results section.

The results section is sub-divided into a major section on the descriptive data, followed by a smaller section which looks for specific group differences using a well recognised analytical procedure, the T test for independent samples.

Each major section is sub-divided into four major categories:

(a) Self Image
(b) P.E. Programme
(c) P.E. Teacher
(d) Activity Patterns

These sections are in turn sub-divided into low and high academic ability groups.

4.2. DESCRIPTIVE ANALYSIS; BRAINTEASER QUESTIONNAIRE AND INTERVIEWS.

In all sections the results of the Brainteaser are presented in tabulated form. The number entered in each cell of the table indicates the number of boys agreeing with the statement made. All boys completed all questions. Therefore, high ability n = 20, low ability n = 20,
total sample n = 40. e.g. (see table below)

<table>
<thead>
<tr>
<th></th>
<th>LOWER</th>
<th>UPPER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Like Attention</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Keep Out Of The Way</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Don't Like Attention</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

It can be seen that 10 of the upper ability pupils Liked attention while only 7 of the lower band pupils liked attention.

The table is followed by extracts taken from the interview transcripts together occasionally with comments from the author based on observations made during the research period. These are described as the observational entities.
4.2.1. SELF IMAGE

Based on earlier trials and evidence from other authors 12 questions were assigned to measure attitudes to Self Image. All responses were based on a scale from a positive through to a negative descriptor.
4.2.1. SELF IMAGE

Based on earlier trials and evidence from authors, 12 questions were assigned to measure elements of Self Image.

Question One. Which Response describes you?

<table>
<thead>
<tr>
<th></th>
<th>LOWER</th>
<th>UPPER</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIT</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>AVERAGE FITNESS</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>UNFIT</td>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 1. Self Perception: Fitness.

Notes from Observational Entities.

In answer to the question "Which response describes you?" The general opinion of the boys was that they were of average fitness with the lower ability group slightly less than 60%. The same percentage felt that they were fit, but this was only 10% of both groups of boys. The marked difference was in the unfit category, where the lower ability group considered themselves more unfit than the upper ability group.

In consideration of the observational entities it was apparent that there was some confusion from both sets of
boys, in respect of how they viewed the term 'fitness'. In individual conversations with some of the boys many saw 'being fit' as being strong whilst a few saw it as being related to running and endurance type activities. For one boy fitness was how many 'press ups' he could do while for another it was how fast you could run the 100m.

It was apparent that there was a need for some form of definition in terms of what fitness really meant and how this was explained within the questionnaire.

From these results it can be seen that the lower ability boys group had more of a problem interpreting what was meant by the word 'fitness' and this reflected in their responses. It was also apparent that the majority of the lower ability boy likened fitness particularly in terms of sportspeople and the event that they did. For example, Seb Coe was fit because he was a good runner, but Frank Bruno was not as fit because he only boxed! Again, this is an example of the word 'fitness' having a different connotation to different groups of boys.
Question 2. Which response describes you?

<table>
<thead>
<tr>
<th></th>
<th>LOWER</th>
<th>UPPER</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTHY</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>AVERAGE HEALTH</td>
<td>11</td>
<td>1.7</td>
</tr>
<tr>
<td>USUALLY ILL</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 2: Self Perception: Health.

Notes from Observational Entities.

In answer to the question "Which response describes you?" The majority of both groups of boys saw themselves as being of average health with none of the sample visualising themselves as unhealthy. The main difference was with the lower ability group feeling that they were healthy, rating 45% in comparison with the upper ability group at 15%.

It is interesting to note whether this could be because the upper ability group may have a more sophisticated understanding of what being healthy is. Could it be that the lower ability group considered themselves healthy if they did not have a disease?

As in the previous question the majority of the boys had a different understanding as to what the term 'healthy' really
meant.

For a number of boys being healthy was :-
"Not being ill".

Whereas, for some others it was :-
"Not being in hospital"

And for some of the lower ability set boys it was :-
"Being able to run around".

So for some boys at least there was a link between health and fitness although for them it was more in relation to not understanding the terms correctly than any physiological connection. Again there seemed to be a problem here in relation to understanding what was meant by the word "healthy". This factor, like the previous question, raised problems in terms of the definition of the word. It was definitely viewed differently by the majority of the lower ability group of boys than by the upper ability group of boys.
QUESTION 3  Which response describes you?

<table>
<thead>
<tr>
<th></th>
<th>LOWER</th>
<th>UPPER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overweight</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Average Weight</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>Thin</td>
<td>8</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 3: Self Perception: Weight

Notes from Observational Entities.

In answer to the question "which response describes you?" A similar number of boys had a feeling that they were overweight, 20% from the lower ability group in comparison to 15% from the upper ability group. The main difference was in the boys consideration of average weight the lower ability group answering with a 40% response and the upper ability group with a 70% response. 40% of the lower ability group said they thought they were thin with 15% of the upper ability group responding to the same question. In general the lower ability group had a perception of being overweight. This could have connotations for how they view P.E.?

In informal conversation with the lower ability set of boys it was very evident that they had very firm beliefs
regarding what was meant by being 'overweight' or 'thin'. The majority saw the term overweight in relation to one boy who was "fat" in the class. Likewise they saw 'thin' in terms of one boy who they called "nailhead" because of his shape.

Both sets of boys saw being overweight as restrictive in terms of physical education. Their opinion was if you were fat you could not be 'good' at P.E. and therefore it was a stigma to be overweight when doing games.

In informal observations of the boys lessons this could be viewed with several incidences resulting in the "fatty" or "thinny" of the group either being 'picked on' or being excluded from activities within the lesson. The author noticed this on several occasions and when questioned, the boys were unaware of the existence of such a situation.

This behaviour was less noticeable with the upper ability group although they still had nicknames for members of the class. They also seemed to demonstrate an ability to associate certain physical features with better performance in sport. So for example, the big heavy boy in the class was also recognised as having strength and ability in athletics where he putted the shot for the school.
QUESTION 4 Which response describes you?

<table>
<thead>
<tr>
<th></th>
<th>LOWER</th>
<th>UPPER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clumsy</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Have Accidents</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>Graceful</td>
<td>9</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 4: Self Perception: Accidents

Notes from Observational Entities

In answer to the question "Which response describes you?" Again the boys from both groups seem to agree with whether they were clumsy or not and whether they had accidents. The slight difference was that the lower ability group saw themselves as being graceful (45%) whilst only 25% of the upper ability group saw themselves as being graceful.

In conversation with both sets of boys it was very apparent that the word 'graceful' created a lot of confusion and was not the best choice of words. Although the author read through the questionnaire before it was issued, this particular question received more queries than any other. This question was designed to try and give the author an insight into how both sets of boys saw themselves. It can be seen that the
results were very similar with the majority responding that they felt that they did have accidents.

The upper ability group of boys linked the word 'graceful' to feminine characteristics with comments such as:

"Does it mean that you are good at dance?"

"You move in a delicate way."

"You walk like a girl."

Whereas the lower ability group of boys viewed the question quite differently as their comments emphasised the "clumsy" boys in the class recounting numerous incidents. i.e..

"He is always having accidents, every day he does something wrong. Yesterday he could not stop his bike and he ran straight into the bike stand and wiped out two peoples bikes. It is a joke with the other lads because they ask him every day what has happened - he's always done something."
QUESTION 5 Which response describes you?

<table>
<thead>
<tr>
<th></th>
<th>LOWER</th>
<th>UPPER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make Friends Easily</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Have Some Friends</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>A Loner</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 5: Self Perception: Friends

Notes from Observational Entities.

In answer to the question Which response describes you? 10% of the lower ability group and 10% of the upper ability group saw themselves as a 'loner'. However, the vast difference was in how the boys viewed whether they could make friends or not. 65% in the upper ability group felt that they could make friends easily, whilst only 25% of the lower ability group felt that they could make friends easily.

It was obvious from interviews with the children that the upper ability set of boys were of the opinion that they had many friends in the class whilst the majority of the lower ability group set of boys felt that they did not make friends easily.

The questionnaire was issued within the first term of
the school year and it was evident from informal discussions with the boys that the upper ability group formed relationships quickly and continued existing friendships from the previous year. However, the lower ability group did not seem in general to automatically extended existing relationships and found it much more difficult to re-establish friendships within the new class.

It was also apparent when talking to the lower ability set of boys that they tended to have friends from other year groups particularly boys who were older than themselves.

There is a marked difference in how many of the lower ability group felt that they could make friends easily in comparison to the upper ability group. It is clear that only a minority of the lower ability group felt they could make friends easily.
QUESTION 6 Which response describes you?

<table>
<thead>
<tr>
<th></th>
<th>LOWER</th>
<th>UPPER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Like Praise</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Don't Like Praise</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Don't Like Praise</td>
<td>15</td>
<td>13</td>
</tr>
</tbody>
</table>

Table 6: Self Perception: Praise

Notes from Observational Entities.

In answer to the question Which response describes you? The number of pupils who didn't want to be made a 'fuss' of was significant and was a fairly equal percentage for both lower and upper band pupils. However, the main difference was in the 'like praise' question where 35% of the upper band group wanted to be praised and only 5% of the lower band group liked praise.

It is clear that the lower band pupils did not want praise which could be a consequence of feeling that they would be picked out as a "teacher's pet." This was reinforced by comments from the pupils in the interviews such as:

"Everybody thinks you're a creep if the teacher keeps
praising you."

"You have to show the rest of the class what you are doing if you get picked out and I hate that."

It was interesting to note the reaction of many of the lower ability group boys when they were praised by the teacher. They often were very embarrassed and would 'duck down' so that other members of the class did not know who the person was who was being congratulated.

It is also surprising to note that the majority of the upper ability set of boys also did not want any fuss. Although they admitted privately that they did like it when the teacher highlighted anything that was good in their performance.
QUESTION 7 Which response describes?

<table>
<thead>
<tr>
<th></th>
<th>LOWER</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Do What Others Tell Me</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Keep To Myself</td>
<td>13</td>
<td>1.7</td>
</tr>
<tr>
<td>Want To Be The Boss</td>
<td>7</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 7: Self Perception: Leadership

Notes from Observational Entities.

There was a definite response to the question "Do what others tell me?" With neither group feeling that this was the situation. However, it could be observed that the majority of both groups wanted to keep themselves to themselves, with the lower ability group (35%) being more concerned that they were in charge. In conversation with the lower ability boys one of the common comments was:

"Nobody's telling me what to do!"

It is significant that the lower ability group were more concerned with being the 'boss' than the upper ability group. In observation of the lower ability group in class, it
could be detected that there seemed to be much more of an 'hostile' atmosphere. This tended to manifest itself in the boys being more aggressive towards each other than the boys in the upper ability group. On several occasions the author detected minor disagreements, with certain individuals nearly coming to blows. It could be observed that there was a form of 'hierarchy' existing within the class and several boys dominating the games situations in particular.
QUESTION 8 Which response describes you?

<table>
<thead>
<tr>
<th>Response</th>
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</thead>
<tbody>
<tr>
<td>Ask Questions</td>
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<td>Ask Questions Sometime</td>
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<td>17</td>
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<tr>
<td>Don't Ask Questions</td>
<td>0</td>
<td>0</td>
</tr>
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</table>

Table 8: Self Perception: Questions

Notes from Observational Entities.

In response to the question Which response describes you? Both the lower ability group and upper ability group felt that they always ask questions. However, the intensity that each group viewed this fact differed, with 35% the lower ability group 'asking questions in comparison to the upper ability group who only had a 15% response.

It is interesting to observe that the lower ability group considered that they asked questions more than the upper ability group. This could reflect their interest in some of the aspects of the work they were doing.

In informal interviews with both sets of boys, it was apparent that they both felt that they did ask questions of the teacher, and that in general they did like asking questions.
However, it was noticeable in observations that the teacher of the lower ability set of boys asked them more questions than the teacher of the upper set boys. Also the teacher of the lower set of boys tended to ask the questions more than once and then chose different individuals to give him the answers. Whereas, in the upper ability group boys lessons, the pupils tended to answer the questions more quickly and then resume activity.

The author felt that:-

(a) The teacher of the lower ability group used the question time to settle the boys down and try to gain their attention.

(b) The teacher had a different style to the teachers who taught the upper ability group; asking more direct questions and expecting very specific answers.
QUESTION 9 Which response describes you?

<table>
<thead>
<tr>
<th></th>
<th>LOWER</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Like Attention</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Keep Out Of The Way</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Don't Like Attention</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 9: Self Perception: Attention

Notes from Observational Entities.

Again there was a nil response to the question 'don't like attention?' from both groups. However, in response to the question 'keep out of the way' there was a fairly even match with 65% of the lower band boys saying they do, and 50% of the upper band boys answering in the same way. There was a difference to the question "like attention" with 35% of the lower ability group saying they would, in comparison with 50% of the upper band group.

This is interesting, as it matches the results of Question 6 which was on liking praise. It can be seen that the lower band boys wanted to keep a low profile although they did enjoy asking questions.

This fact was reinforced in conversation with the lower
ability group boys who made comments like :

"It's O.K. answering questions sometimes, but if the teacher keeps asking you for the answer, then the others think that you are his pet."

"I always feel really 'shown up' if the teacher keeps asking me questions."

"It's O.K. for a while then the other lads take the 'micky' out of you."
QUESTION 10  Which response describes you?

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<thead>
<tr>
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<tbody>
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<tr>
<td>Don't Mind Competition</td>
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<td>13</td>
</tr>
<tr>
<td>Don't Like Competition</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 10 : Self Perception Competition

Notes from Observational Entities.

The response to this question by both groups is of no marked significance. The majority of boys either liked competition or did not mind it, with 30% of the lower band boys not liking competition, and 20% of the upper band boys responding in the same way.

In conversation with the boys from both ability groups the author was quite surprised to discover that they did not seem to be too concerned whether they were in competition with the others in the class are not. Although some of the boys from both ability groups who represented the school teams tended to be the ones who said that they liked competition.

The author felt that there were two factors which could have influenced this which were :-
(a) The boys from both ability sets saw 'competition' in a very specific way which was usually related to playing a recognised game for the school team or for a club outside school. They did not seem to be able to relate this notion to small games that they played in the lesson time.

(b) The school was an advocate of the 'teaching for understanding' principle in games and much of their lesson times were involved in this type of work. The boys played many enabling games and modified games which often did not have a recognised game form. The work progressed as a series of problems and the boys had to take far more responsibility in terms of rules, team selection, and equipment selection.
QUESTION 11 Which response describes you?

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<thead>
<tr>
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<tbody>
<tr>
<td>Talkative</td>
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<td>14</td>
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<tr>
<td>Talk Some Of The Time</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Quiet</td>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 11 : Self Perception : Talking

Notes from Observational Entities.
It would appear from the question 'Are you talkative'? that the lower band group with 20% and the upper band group with 70%, showed a significant difference. It would appear that the upper band group saw themselves as being very talkative whilst the lower band group felt that they did talk some of the time.

This would indicate that conversation between each other was perhaps an expected process with the upper band group whilst it was not may be so with the lower band group.

These results would seem to link with those already observed in questions 6, 9 and 10.
In conversation with the boys from the upper ability set, they thought that they did talk alot, both to the teacher and each other. They thought that generally everyone in the group had something to say and that the teacher did not mind if they talked amongst themselves during the lessons. Also the author felt that in the interview situation the upper ability boys tended to say more and talk more spontaneously.

In comparison the lower ability group boys tended to talk some of the time but generally were "no bothered" if they did not. The author also found it more difficult to get comprehensive answers from the boys in interview; they tended to use one or two word answers or just say 'yes' or 'no'.

Page 137
QUESTION 12 Which response describes you?

<table>
<thead>
<tr>
<th></th>
<th>LOWER</th>
<th>UPPER</th>
</tr>
</thead>
<tbody>
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<tr>
<td>Unhappy</td>
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</tbody>
</table>

Table 12: Self Perception: Happiness

Notes from Observational Entities.

Neither of the groups saw themselves as being unhappy, whilst the majority of both the lower ability group and upper ability group saw themselves as being happy. A difference of 20% can be seen from the lower ability group to the upper ability group in terms of being 'shy'.

It is interesting to see that the vast majority of boys saw themselves as being happy and having fun, and in conversation said that there was not many occasions that they considered themselves to be sad.
4.2.2. THE PHYSICAL EDUCATION PROGRAMME

Based on earlier trials and evidence from other authors 11 questions were assigned to measure attitudes to the P.E. programme. All responses were based on a scale from Sad through Not Bothered to Happy.
QUESTION 1  How do you feel when it is time for your P.E. lesson?

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</tr>
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<tr>
<td>5</td>
<td>9</td>
<td>17</td>
</tr>
</tbody>
</table>

Table 13: Perceptions; P.E. Lesson.

Notes from Observational Entities.

In answer to the question "how do you feel when it is time for your P.E. lesson?" 85% of the upper band set said they were very happy whilst only 45% of the lower band responded in the same way. Although several of the children who stated they were not bothered still considered it an important subject in relation to other subjects such as Maths and English. In observation of the pupils in these two lessons it was quite evident that this enthusiasm generally was not as high as when they were in their physical education lessons. The author
followed both sets of boys in other lessons and noticed that they tended to:–

(a) Ask less questions.
(b) Not bring the correct equipment i.e. pen, pencil etc.
(c) Loose concentration easily.

It appeared from observations of the boys in lessons and also in informal conversations with them, that generally they enjoyed their physical education lessons and looked forward to it during the week. Whilst walking to the playing field with a group of boys who were going to take part in a soccer session comments such as:–

"P.E. is great it is the best lesson of the week."
and:–
"You can really have alot of fun in P.E."

could be heard.
QUESTION 2 It is an indoor lesson, how do you feel?

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<tr>
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<th>Upper</th>
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<tbody>
<tr>
<td>1</td>
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<tr>
<td>5</td>
<td>9</td>
<td>13</td>
</tr>
</tbody>
</table>

Table 14 : Perceptions; Working Indoor

Notes from Observational Entities.

In answer to the question "It is an indoor lesson, how do you feel?" it can be seen that the majority of pupils from both ability sets stated they would prefer to work indoors, 65% for the upper ability group and 45% for the lower ability group. However, it is worth mentioning that 35% of the lower ability group would prefer to work outside with a 30% neutral opinion.

These findings concur with Heathcote (1988) in her study into attitudes of 11-14 girls where she states;-

"The vast majority of girls preferred to work indoors
and out of the cold." (49a)

The findings from this sample group may have to be tempered however, as in conversation with the boys on this topic it was relevant that the 1/2 mile walk from the changing had a bearing on their comments i.e.

"I don't mind going outside too much, but if it is raining then you get wet through before you even get to the field."

and:-

"We have good facilities so why do we need to go outside when we can play football inside?"
QUESTION 3  It is an outdoor lesson, how do you feel?

Table 15: Perceptions; Working Outdoors

<table>
<thead>
<tr>
<th></th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>9</td>
</tr>
</tbody>
</table>

Notes from Observational Entities.

In answer to the question "It is an outdoor lesson, how do you feel?" It can be seen that a slight majority said they did like to work outside, with 50% of the lower ability boys and 45% of the upper ability boys making this response. A significant percentage were in the 'not bothered' category with the lower ability group indicating with 35% and the upper ability group responding with 50%.

This would seem a slight contradiction to the results of the previous question although the author is of the opinion that the boys saw this question more in terms of working outside in good weather. Where as they saw question 2 more in the
context of the weather being poor, either cold or wet.

Indeed in interview with the boys from the upper ability set the comments tended to be in relation to specific activities such as athletics and cricket in terms of the weather being good. The boys did not consider 'bad weather' and working outside until the author asked them specifically about it.

So in other words the boys from both ability sets preferred to work indoors as a general rule, but they enjoyed being outside particularly when the weather was good and they could fully exploit summer games.
QUESTION 4  It is a mixed P.E. lesson, how do you feel?

<table>
<thead>
<tr>
<th></th>
<th>Lower</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>5</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 16: Perceptions; Mixed P.E. Lesson

Notes from Observational Entities.

In answer to the question "It is a mixed P.E. lesson, how do you feel?" It can be seen that opinion was quite evenly spread with 20% and 25% of the lower ability and upper ability boys respectively 'not bothered', whilst 35% for both sets was the response to the question 'being happy' and 45% for the lower ability group and 15% for the upper ability group to the question 'sad'.

These results do not give a totally true picture of the general opinion as from many of the transcripts the boys, particularly the lower ability group were not keen on working
with the girls and comments such as:-

"I hate it - they are rubbish at games".

"You can't tackle them in rugby."

"They are silly they always want to talk, instead of playing the games."

In the notes taken prior to the gathering of this data, the concept of a co-ordinated mixed group was not available. Therefore, the author felt that the boys in both ability sets needed more experience of the mixed group setting to make totally accurate comments.
QUESTION 5 How would you feel if you could choose what P.E. activities you did in your lesson?

Table 17: Perceptions; Choosing P.E. Activities

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<tr>
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<th>Lower</th>
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<tbody>
<tr>
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<tr>
<td>5</td>
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</tr>
</tbody>
</table>

Notes from Observational Entities.

In answer to the question "How would you feel if you could choose what P.E. activities you did in your lesson?" It would appear that the majority were not particularly 'bothered' whether they could choose their own activities. This was particularly the case with the upper ability group of boys who indicated by a 70% response to this question, with a 45% response from the lower ability set.

It is interesting to note that there was no definite opinion one way or the other in response to this question,
which would indicate that the boys on the whole were quite in favour of the P.E. programme as it was. Although there was a suggestion that they would like some choice in some areas.

In conversation with the upper ability group of boys it was noticeable that they felt very good about what they experienced in terms of their P.E. programme, with comments such as:-

"It is the best subject, I look forward to it."

"Everything that we do is really good."

and:-

"There is a lot of different activities and you never get bored."
QUESTION 6  How do you feel when you know you are not very good at P.E.?

Table 18 : Perceptions; Not good at P.E.

<table>
<thead>
<tr>
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<tbody>
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<tr>
<td>5</td>
<td>12</td>
<td>16</td>
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</tbody>
</table>

Notes from Observational Entities.

In answer to the question "How do you feel when you know you are not very good at P.E." A majority responded that they didn't really feel too concerned, with 85% of the upper ability group and 60% of the lower ability group responding positively. It seems that the boys were not too concerned as long as they felt they were enjoying the lesson. A quote from the transcript describes this:-

"I would like to be better, but I really enjoy P.E. anyway".
It would appear from this question that at this age the boys would like to get better but they seem to be more concerned that they enjoy the work. From the observational entities it could be ascertained that most of the boys knew who was good and who was not so good at P.E. and although they would like to be better it was not the most important consideration.

It would also seem from conversation with the boys from both groups that they enjoyed the assessments that the department periodically undertook. They felt that this was a good indicator of their effort and looked forward to having their grades read out by the teacher; even if the results only showed a slight improvement.
QUESTION 7 How do you feel when you are doing soccer?

Table 19: Perceptions; Soccer

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<tr>
<th></th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
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</table>

Notes from Observational Entities.

In answer to the question 'How do you feel when you are doing soccer?' the majority of both groups of pupils responded that they liked it, but not to one extreme or another. This is reflected in a 55% equal response from both sets of boys at the 'not bothered' level. It is interesting to note that nearly one third of the lower band ability group pupils said that they did not enjoy their soccer lessons.

The results from this question are surprising as you would think that most of the boys would be very positive to
playing soccer. This could be an indication of the lack of interest in some of the major games, or that this fact could also be due to the games programme within the department which was very much dominated by a 'teaching for understanding approach', whereby the boys played modified games using a variety of game skills, such as kicking, passing and heading the ball. This resulted in the boys from both ability sets not playing any of the recognised major games in the first two years. Thus, soccer was only experienced as an extra curricular activity, although there would be a 'kicking a ball' type game played in the second year.
QUESTION 8 How do you feel when you are doing swimming?

<table>
<thead>
<tr>
<th></th>
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<th>Upper</th>
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<tr>
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<td>4</td>
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</table>

Table 20: Perceptions; Swimming

Notes from Observational Entities.

In answer to the question "How do you feel when you are doing swimming?" It would seem that many of the boys responded in a positive way, but the lower ability group in particular (at least half of them) did not like or want to do swimming, whilst a large 65% of the upper band group said that they did.

This question gave one of the largest marked difference to date with the upper ability group boys being very positive about swimming and the lower ability group boys being quite negative about the activity.
Both sets of boys did have swimming lessons at the local pool, and in informal discussions it was obvious that the views of the two groups differed immensely. When questioned further one factor 'came out' above all others, which was that many of the upper ability sets boys parents accompanied them to the swimming baths in their leisure time. This was not the case for the lower ability set of boys who tended not to go swimming. Comments such as:-

"I would rather go out on my bike."

or;-  

"It's too much trouble and you can't 'mess' about anyway."

"It's too expensive."

were often recorded from the lower ability set of boys.
QUESTION 9 How do you feel when you are doing Basketball?

<table>
<thead>
<tr>
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Table 21: Perceptions; Basketball

Notes from Observational Entities.

In answer to the question "How do you feel when you are doing Basketball?" It would appear that the majority of the upper ability group boys, 65% were very positive, with 40% of the lower ability group also responding in the same way. Only 20% of the lower band group said they were not happy about doing Basketball.

These results would indicate that the boys enjoyed this traditional team game as much if not more than soccer.
This could be because of it being smaller sided which ultimately resulted in more activity or that it takes place indoors, which as we have seen from previous results is a preferred option.

It could also have some connection with the P.E. programme where the boys experienced a great deal of 'pass/catch' activities as part of their 'teaching for understanding' games programme. Indeed much of the competitive situations the boys from both ability groups experienced came from Basketball type activities.
QUESTION 10  How do you feel when you are doing cross-country ?

Table 22 : Perceptions; Cross-Country

Notes from Observational Entities.

In answer to the question "How do you feel when you are doing Cross-Country?" It would appear that this is still viewed by the majority of boys as being a good activity with no negative responses and the upper ability group responding with a 75% confirmation of this. It would appear that there was a little more apathy with the lower band boys with 55% saying they were 'not bothered.' In informal discussions with both sets of boys, they seemed not to dislike this activity because of its continuous nature, even though it is outside.
QUESTION 11 How do you feel when you are doing gymnastics?

![Table 23: Perceptions; Gymnastics](image)

Notes from Observational Entities.

In answer to the question "How do you feel when you are doing gymnastics?" Many boys from both sets said that they were 'not bothered' with a 55% response. More boys indicated that they were not too happy about gymnastics than were, with only 15% of the upper ability group responding in the positive.

Gymnastics would not appear to be too popular an activity with the boys although it is performed indoors. This may be the result of it not being a team game, which a lot of the boys enjoyed most, or because it is more of an individual activity with the boys.
activity.

In the interview many boys from both sets had similar comments to make about their gymnastics lesson:-

"Gymnastics is O.K., sometimes if you can go on the ropes."

"I don't like gymnastics, only when I can work with my friend."

and:-

"There are not many lads in the class who are good at gymnastics and the ones who are, are chosen for the demonstrations and also go on the best equipment."
4.2.3. THE PHYSICAL EDUCATION TEACHER

Based on earlier trials and evidence from other authors 10 questions were assigned to attitudes to the P.E. teacher. In all of the questions the response was Yes or No or Not Sure.
QUESTION 1. Do you think you get on with your P.E. Teacher?

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<tr>
<td>No</td>
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</tr>
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</table>

Table 24: Get on with P.E. Teacher

Notes from Observational Entities.

In answer to the question "Do you get on with your P.E. teacher?" It would seem that the majority of the lower band group responded in a negative way with 85% saying they did not, whilst with the upper band boys 70% felt that they did. Only 15% of the lower ability group saw themselves as getting on with their P.E. teacher.

This is a surprising response from the lower ability group of boys as you would think that their answer would be favourable. However, after examining the transcripts it would appear that the teacher of the lower ability group was not the same as for the upper ability group and there was friction between him and the class. This teacher had only recently taken over the group and was new to the school, although he had been teaching for quite a while. In observation, he seemed
to be aggressive in his teaching style and shouted most of the time. In contrast to this the upper band group of boys were taught by the Head of Department who had a very friendly but firm manner. He had also taken the class since they had started in the school, and was a first year form tutor.
QUESTION 2  Do you think you get on with other P.E. Teachers?

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<tr>
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</table>

Table 26: Get on other P.E. Teachers

Notes from Observational Entities.

In answer to the question "Do you think you get on with other P.E. teachers?" There was a better response from the lower ability group, only 10% of which said 'no' and 40% responded with 'yes'. The upper ability group answered in a very positive way with 55% saying 'yes' they did get on with other P.E. teachers.

It would appear that the lower ability group are more positive about getting on with other P.E. teachers and this was evident from some of the comments from the transcripts, where one boy said:-

"I like Mr. X, you can have a laugh with him!"

" I get on with Mr. Y because he does not shout as much as
Mr. Z and also he is good at soccer."

"Mr. X is always messing around, and he makes the lessons really interesting."
QUESTION 3 P.E. Teachers try to make the lesson fun?

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</table>

Table 27 : P.E. Teachers make lesson fun

Notes from Observational Entities.

In answer to the question "Do P.E. teachers make the lesson fun?" There was a consensus of opinion, with both the lower and upper band sets responding with 'yes'; 60% and 65% respectively. The boys from both groups responded with 35% 'not sure' and only 5% of the lower band boys thought 'no'.

It would seem that many boys thought that the P.E. teacher made the lesson fun, and of the pupils that stated 'not sure' (from transcript information) it was a question of individual activities that they didn't like rather than the whole subject.
QUESTION 4  P.E. Teachers try to work you too hard?

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</table>

Table 28 : P.E. Teachers work you too hard

Notes from Observational Entities.

In answer to the question "Do P.E. teachers try to work you too hard?" it would seem that many pupils were 'not sure' with 45% of the lower ability group and 35% of the upper ability group response to this question. The upper band boys thought that this was not the case, while the lower band ability group were more positive in their response to the question.

It seems that both groups were not sure whether the P.E. teacher worked them too hard, and could not agree on this statement.
QUESTION 5  P.E. Teacher's are too strict?

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</table>

Table 29; P.E. Teachers are too strict

Notes from Observational Entities.

In answer to the question "P.E. teacher's are too strict?" It would appear that the general feeling was that they were not. The majority of the lower ability group, 60% felt they were 'not sure' in this respect, while the majority of the upper ability boys saw the P.E. teacher as not being too strict. However, from transcript information it would seem that the boys from both ability groups did think that the P.E. teachers were "loud". It was also noticeable from comments made during the informal interviews that many of the lower ability group boys were not sure whether their P.E. teacher was too strict because they were of the opinion that their particular teacher was "grumpy" and "aggressive".
QUESTION 6  P.E. Teachers look unfit and unhealthy?

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<tbody>
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<td>16</td>
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<tr>
<td>No</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 30 : P.E. Teachers are unfit

Notes from Observational Entities.

In answer to the question "P.E. teachers look unfit and unhealthy?" The majority of pupils answered in the 'not sure' and 'no' categories. Although half the lower ability group boys thought that P.E. teachers looked unhealthy and unfit.

It is interesting to note that like question 1 the lower ability group felt negative towards the teacher. Again this could be a consequence of this group not getting on with their P.E. teacher. Unfortunately it did not help that their particular P.E. teacher was overweight and did not do any demonstrations.
QUESTION 7 P.E. Teachers try to encourage you?

<table>
<thead>
<tr>
<th></th>
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<th>Upper</th>
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<tbody>
<tr>
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<td>0</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 31: P.E. Teachers encourage you

Notes from Observational Entities.

In answer to the question "P.E. teachers try to encourage you?" The vast majority of both groups of boys felt that they did, with 80% of the lower ability group and 85% of the upper ability group responding to this question. Only 15% of the upper band thought that P.E. teachers did not try to encourage you.

In informal conversation with the pupils from both ability sets it was interesting to note that in general they thought that their P.E. teacher did try to encourage them. The boys thought that in comparison to other teachers the P.E. teacher tended to be more enthusiastic, usually joked, 'messed around' more and laughed alot. Even the lower ability set of boys thought this, although they did have reservations about the particular teacher that taught their group. In informal
conversation they said that the teacher could be O.K. some of the time but he was not as "friendly" as some of the other P.E. teachers.

In interview with both sets of pupils it was apparent that they thought that one of the reasons that the P.E. teacher was generally enthusiastic was the more 'informal' manner he adopted. This they said encouraged more interaction with the teacher, and was helped by not being in a classroom situation. So for example many of the boys had recollections of incidenses where they were involved with the P.E. teacher in a more informal setting such as a school trip or journey. From transcript material such comments were noted:-

"Mr. Y was fantastic, he joined in and was a real good laugh on holiday."
QUESTION 8  P.E. Teachers pick on you if you are not very good?

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<tr>
<th></th>
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<tbody>
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<td>15</td>
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</table>

Table 2 : P.E. Teachers pick on you

Notes from Observational Entities.

In answer to the question "P.E. teachers pick on you if you are not very good?" It would seem that each set of boys disagreed totally, with a similar number placing themselves in the 'not sure' category. 75% of the upper group thought that the P.E. teacher did not pick on them while 65% of the lower group thought that they did.

These responses by the boys would again match questions 1 and 5 where the teacher had a differing influence on the two sets of boys.
QUESTION 9 P.E. Teachers make lessons boring?

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<thead>
<tr>
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<tr>
<td>No</td>
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<td>18</td>
</tr>
</tbody>
</table>

Table 33: P.E. Teachers make lessons boring

Notes from Observational Entities.

In answer to the question "P.E. teachers make lessons boring?" The upper ability group felt resoundingly that they didn't, with a large 90% response. The majority of the pupils in the lower band group 75% were 'not sure' about this question, with 25% feeling that P.E. teachers did make the lessons boring.

Again this result could tie in with the already established fact that many of the lower ability group boys felt that they did not get on with their P.E. teacher.
QUESTION 10  P.E. Teachers try to make the lesson interesting?

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<tbody>
<tr>
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<tr>
<td>No</td>
<td>17</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 34: P.E. Teachers make the lesson interesting

Notes from Observational Entities.

In answer to the question "P.E. teachers try to make the lesson interesting?" The majority of the upper ability group, 90% were positive in their response and a half of the lower ability set also thought that the P.E. teacher tried to make the lesson interesting.

This response compliments questions 9 as far as the upper ability group are concerned but as for as the lower ability group, it contradicts the last questions findings. Perhaps they feel that P.E. teachers do try to make lessons interesting, but sometimes fail.
4.2.4. ACTIVITY PATTERNS

Based on earlier trials and evidence from other authors 6 questions were assigned to measure attitudes to Activity. In all questions the response was Active to Moderately Active through to Inactive.
SECTION FOUR.

QUESTION 1 Playing games, using computer, watching T.V.?  

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<tbody>
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<td>Moderately Active</td>
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<td>7</td>
</tr>
<tr>
<td>Inactive</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 35 : Activity; Playing Games, T.V.

Notes from Observational Entities.

In answer to the question "Is this you?" Playing on the video games, using a computer or watching television, the majority of both sets of boys; upper set 65%, lower set 55%, felt that they were active in their own time. Whilst 15% of the lower ability group and 35% of the upper ability group thought that they were moderately active, and 30% of the lower band group thought that they were inactive.

It would appear that most of the boys thought that they were active, although some of the boys in conversation did express some confusion over what they 'saw' as active and inactive. For example some of the lower ability group boys
saw watching television as being inactive but playing a computer game as not being inactive. Both groups of boys made a very interesting comment in that they said that they thought the picture in the cartoon strip indicated boys playing games in a casual way rather than playing for a team. When questioned further it was evident that many of the boys thought that if you played for an organised team you were more active than if you just had a "kick about".
**QUESTION 2  Playing Football, Spectating ?**

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<tr>
<th>Activity</th>
<th>Lower</th>
<th>Upper</th>
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</tr>
<tr>
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<td>0</td>
</tr>
<tr>
<td>Inactive</td>
<td>4</td>
<td>5</td>
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</tbody>
</table>

*Table 36 : Activity; Playing football, Spectating*

Notes from Observational Entities.

In answer to the question "Are you a player or a spectator ?" It would appear that many of the boys saw themselves as players and were active (75% lower ability group, 80% upper ability group) with 25% of the lower ability group and 20% of the upper ability group seeing themselves as being inactive or spectators.

It was interesting to note that the majority of the boys saw themselves as being active and not spectators and commented further that if they did have to spectate it was either because they could not get in the team (school or other) or that they were watching a professional game of some description.

In informal conversation with the boys from the lower ability group it was apparent that they were of the opinion that you could not do both, you were either a spectator or a
player and players did not spectate and spectators did not play. This view was less obvious with the upper ability boys who even linked playing with spectating and said that if you were good at a game such as soccer then you would also be more than likely to watch the game as a spectator. The following comments were noted:

"A really enjoy playing football, and I like watching as well."

"I'd rather play sport but if I can't then I like watching the game."
QUESTION 3 Cycling, watching football, stood freezing?

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<tbody>
<tr>
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<tr>
<td>Inactive</td>
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<td>3</td>
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</tbody>
</table>

Table 37: Activity; Cycling, watching, standing

Notes from Observational Entities.

In answer to the question "Which one is you?" Riding a cycle, watching football, stood in the cold. The majority of the upper set said that they were involved in an activity (80%), with 15% responding that they felt that they were a spectator. In the lower ability set, 55% of the boys thought that they were active with 15% considering themselves as spectators.

It would seem that many of the boys saw themselves as being active, whilst only a few saw themselves as being inactive.

In conversation with boys from both ability sets it was apparent that they did not see cycling as being all that active. Although, when questioned closer it was obvious that many of the boys did cycle and probably worked aerobically harder during this activity than they did in other activities such as...
It is interesting to note that a percentage of the lower ability set of boys felt that they were only moderately active. When questioned about this, they thought it was due to the fact that they saw cycling as a moderately active activity. Only one boy in this group felt that he did not do any activity at all. He said in interview that he only played on his computer and tried to avoid P.E. lessons.
QUESTION 4 Looking forward to P.E. having another note?

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<tbody>
<tr>
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<tr>
<td>Inactive</td>
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</table>

Table 38: Activity; Looking forward P.E./note

Notes from Observational Entities.

In response to the question "Are you looking forward to the P.E. Lesson? Or have you another note?" The vast majority of the boys (90% for the lower ability set and 80% for the upper ability set) said that they were looking forward to the P.E. lesson. Although 20% of the upper ability set did say that they saw themselves as inactive because they had to bring a note again, which matches the previous section, with some pupils particularly the lower ability set said that they were sometimes not interested in their P.E. lesson. The results from this question would suggest that the boys from both ability sets did not really find excuses, even though a minority of boys were not that 'keen' on physical education, but were still fairly positive about taking part.

In interview with boys from both ability sets it was very
clear that the vast majority really looked forward to physical education lessons and indeed stated that it was their favourite lesson of the week. Some boys from the lower ability group did state that they were not as keen as they used to be because of the teacher, but they felt that generally you were active in physical education lessons.
QUESTION 5  Team captain, picked first, picked last ?

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Table 39 : Activity; Team captain, picked last

Notes from Observational Entities.

In answer to the question "How do you feel if you are the team captain, chosen first, chosen last?" The majority of both sets of boys said that they felt they would adopt a role which encouraged activity. 85% of the lower ability group and 50% of the upper ability group thought that they would either be the captain or chosen first. Only 15% of the lower ability set boys said that they thought they would be picked last and not be involved with the game, whilst a large percentage 50% of the upper band boys thought that they could be picked last. It could be that there were signs of a more definite differentiation on the part of the upper ability set. This was evident in informal conversation with the upper ability group where some boys felt that there was a definite "pecking order." They were of the opinion that some of the class had their own friends and this influenced who was picked who, in such a situation, as
depicted in the cartoon. This they felt influenced the level of physical activity they were involved in during their P.E. lesson.

It is interesting to note that the upper ability set of boys did not see themselves as moderately active, but either active or inactive.
QUESTION 6  This is easy, this is hard work, but I'm trying, giving up?

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</table>

Table 40: Activity: Easy, hard work, giving up.

Notes from Observational Entities.

In answer to the question "Is this activity easy, hard work, I am trying, I'm giving up?" The majority of both sets of boys stated that they felt that they were active, with 80% in either case saying that they considered the activity either easy or hard work. Only 5% in both cases stated that they would give up. It would appear that the lower ability set of boys and the upper ability set of boys considered physical activity as being hard and that's how they preferred it.

This relates to the previous question and establishes that many of the boys from both ability groups consider being active as being hard work. In conversation with both groups it was evident that in their opinion being physically active related to the degree of physical work you did. So as in question 3, bike riding was not considered to be physically...
demanding. With some of the boys saying they were not active whilst cycling. Comments noted were :-

"You have to sweat to be really active in P.E."

"If your muscles are hurting and you feel tired then you know that you are getting fit."
4.3. STATISTICAL ANALYSIS OF RESULTS

Whilst the major intention was to describe the responses of the boys in the two groups to four key categories relevant to attitudes and activity. It was decided as the Brainteaser allowed ready qualification and as the teachers had qualified on the basis of transcripts for the purpose of validity (see earlier), the objective results would be used to compare the differences between groups. Means and standard deviations were calculated for each ability band of the four categories for both combined teachers scores and the Brainteaser. T tests were then used to assess the significance of the difference between the two groups on each of the four categories.

**Self Image.**

The first procedure tested whether pupils in the lower band had different Self Image scores to those in the upper band, as measured on the combined teachers scale and on the Brainteaser.

Tables XX1 shows the mean, standard deviation and the results of the 'T' tests for Self Image.
T Test of Lower and Upper Band on Self Image assessment as Combined Teachers scores and Brainteaser.

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<tr>
<th>Combined Teachers Scores</th>
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<table>
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Table XX1: Pupils Self Image

It does appear that the interpretation of the Brainteaser had some agreement with responses of the children's comments by the teachers. However, it is beyond the scope of this study, but interesting to note that interpretations made by the male teacher of the boys' responses, more nearly matched the Brainteaser results, posing the question is there a gender difference in response to some of the questions?

Attitudes to Physical Education

The first procedure tested whether pupils in the lower band had different attitudes to physical education than pupils in the upper band, as measured on the combined teachers' scale and on the Brainteaser. Table XX2 shows the mean, standard deviation and the results of the T test for attitudes to physical education.
T Test of Lower and Upper Band on Attitudes to P.E. assessment as combined Teacher Scores and Brainteaser.

<table>
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<td>Standard Deviation</td>
<td>6.434</td>
<td>12.294</td>
</tr>
<tr>
<td>T Test</td>
<td>-4.109</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brainteaser</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>78.35</td>
<td>43.1</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>6.434</td>
<td>5.721</td>
</tr>
<tr>
<td>T Test</td>
<td>18.31</td>
<td></td>
</tr>
</tbody>
</table>

Table XX2: Attitudes to Physical Education

In the case of the attitudes to the P.E. programme the comparison of means in both the combined teachers and Brainteaser scale would suggest differences between groups. The T test results would support this observation.

Perception of the Physical Education Teacher

The first procedure tested whether pupils in the lower band had different perceptions of the P.E. teacher than pupils in the upper band, as measured on the combined teachers scale and the Brainteaser.

Table XX3 shows the mean, standard deviation and the results of the T tests for Perception of the Physical Education Teacher.
T test of the lower and Upper band on Perception of the P.E. Teacher assessment as combined teacher scores and on the Brainteaser.

<table>
<thead>
<tr>
<th>Combined Teachers Scores</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.45</td>
<td>5.05</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>3.531</td>
<td>2.665</td>
</tr>
<tr>
<td>T Test</td>
<td>-2.628</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brainteaser</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>1.65</td>
<td>1.25</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.424</td>
<td>2.099</td>
</tr>
<tr>
<td>T Test</td>
<td>0.705</td>
<td>0.705</td>
</tr>
</tbody>
</table>

Table XX3: Perception of the P.E. Teacher

In the case of the perception of the P.E. teacher the mean and standard deviation may indicate some difference but it would appear that the Brainteaser is not as sensitive on this issue.

**Activity Patterns**

The first procedure tested whether pupils in the lower band had different activity Patterns to those in the upper band, as measured on the combined teachers scale and on the Brainteaser.

Table XX4 shows the mean, standard deviation and the results of the T tests for Activity Patterns.
T Test of lower and upper band pupils on Activity Patterns assessment as combined teacher scores and on the Brainteaser.

<table>
<thead>
<tr>
<th>Combined Teachers Scores</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4</td>
<td>5.05</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>3.81</td>
<td>2.665</td>
</tr>
<tr>
<td>T Test</td>
<td>-1.01</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brainteaser</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>1.45</td>
<td>2.85</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>2.625</td>
<td>1.981</td>
</tr>
<tr>
<td>T Test</td>
<td>-1.904</td>
<td></td>
</tr>
</tbody>
</table>

Table XX4 : Activity Patterns

A comparison of the mean scores on both the combined teachers scale and the Brainteaser scale indicate very little difference (particularly relevant to the standard deviation scores gained) Not surprisingly from these figures the 'T' tests would support the notion of no significant difference.

In the case of activity patterns there can be some differences ascertained with both the mean and standard deviation scores, which was also picked up by the Brainteaser.

Whilst it appears the Brainteaser seems to be producing similar scores to the combined scores of the teachers, there is
sufficient difference between the teachers, and between the teachers and the Brainteaser, to suggest that a combination type questions and interview interpretation should be used in research of this sort. Not withstanding this conclusion the author felt confident to use the Brainteaser to examine difference between groups.

The next chapter looks at the results and draws conclusions in relation to the findings.
CHAPTER FIVE

5.0. DISCUSSION AND SUMMARY OF FINDINGS.

5.1. INTRODUCTION.

The discussion of the results is set against previous findings, but also includes information of a none general type, gained during the observations but not necessarily included in the specific results.

In this section an examination of the findings of the study will be summarised. In addition, a summary will be given of how the work relating to boys' perceptions of physical education may be developed or utilised. There will also be a suggestion of how the main themes in the study could relate to other research done in this area. Finally, an identification of the study's limitations and suggested improvements will be made along with the examination of the implications for future initiatives. In an attempt to discuss the findings of the results in more depth a reference to the original main areas of enquiry relating to the study of boys' perception of physical education will be reviewed.

It has previously been established through a review of pertinent literature that in order to gain a clear understanding
of how boys feel about physical activity and physical education a number of main areas provided a framework for the enquiry; they were,

1. The pupils' self image
2. The influence of the Physical education Programme.
3. The influence of the teacher
4. The activity patterns of 11 to 13 year old boys.

It is through an awareness of the above sections that an attempt will be made to discuss the findings of the questionnaire, interviews, fieldnotes and general observations. Several authors have previously used questionnaires to glean information about attitudes towards physical education (Dickenson, 1987;) and the activity patterns of children (Telama et al, 1985). The use of questionnaires with younger children and lower ability pupils has been questioned by other authors (Saris, 1986; cited in Rowland 1990), specifically, if these groups can effectively provide sufficiently accurate information about their activity and attitudes towards physical education. Issues such as vocabulary used in such instruments, as well as the respondents reading ability have all been raised. For this and other reasons, which the author
has already stated, the need for the development of the Brainteaser Questionnaire, which has been at the heart of this research was necessary. The questionnaire was developed after two pilot questionnaires and the re-structuring and establishment of the children's own ideas from these two instruments.

With some confidence about the accuracy of the Brainteaser Questionnaire a further problem remained which was ascertaining whether the questionnaire was a true reflection of the children's own assessment of themselves.

To this end two experienced teachers were asked to rate children according to their perceived levels of activity and attitudes to Physical Education, and a discussion of the results of these findings can be found later on in the chapter.

Throughout the study it has been established that there is general agreement that children should be more active. Many authors have expressed concern about the nature of physical education in schools and the resultant activity patterns of boys outside the curriculum.

"The history of the role of the school in socialising children into sport is well documented. From early concerns with the development of the appropriate physical and social
attributes befitting the children of the middle class (Hargreaves, 1979, Fletcher 1984) to a concern with providing more general physical fitness and health among the population at large (Scraton, 1986) through to the promotion of active lifestyles (Almond 1983), the school has served to communicate the idea of physical education and sport as beneficial."(50)

      Research evidence then, quite clearly justifies the need for children to be active and adopt an active lifestyle as part of their daily routine. Following the recent concerns over children's inactivity, there is obviously a need for the promotion of an often declared aim of physical education, which is the development of positive attitudes towards physical activity, as well as to be active, (Almond, 1984; Fox, 1984; Laventure, 1985; Taylor 1985); and yet as we have seen from the review of literature children generally have been perceived as inactive. The overwhelming weight of evidence concerning children's activity patterns appears to point to children being progressively less active with age, for girls to be less active than boys, and for activity to be generally below the threshold for any significant improvement in aerobic capacity.

      It is through an awareness of the four sections already
outlined that an attempt will be made to discuss the findings of the questionnaire, interviews and general observations so as to ascertain whether the studies findings are similar or not to the previous research.

5.2. THE BOYS' SELF IMAGE AND RELATIONSHIP TOWARDS THE BOYS' PERCEPTIONS OF PHYSICAL EDUCATION AND PHYSICAL ACTIVITY.

It has been established on several occasions in the review of literature that a number of authors have identified the importance of self image and body image in the formation of attitudes of pupils towards physical education. (Hendry 1968)

For this reason the author when looking at the possible differing attitudes between two academic sets, saw the influence of this area as being quite significant. From his own experience he had observed on several occasions, boys who seemed to hold negative attitudes to physical education because they believed they were "rubbish" at it.

The majority of pupils from both sets of boys stated that generally they saw themselves as happy, healthy, independent, liked to be good at physical education, liked to work hard in physical education, and that physical education was
interesting to them.

The main findings of the study showed that generally the pupils:

(1) Had a reasonable self image, although boys in the upper ability group seemed to be more positive in how they viewed themselves.

(2) Thought that being fit and looking fit was an important element in being 'good' at physical education.

(3) The upper ability set of boys considered themselves in general, fitter than the lower ability group boys.

(4) Both groups of boys stated that they saw being healthy as an important factor in whether you were considered good at physical activity or not.

(5) The pupils stated that being overweight was a restricting factor in how others saw you in physical education. With both sets of boys stating that they thought that it was better to be thin than overweight in terms of body image.

(6) Boys from both ability sets stated that they thought having friends and being able to make friends was important in 'success' in physical education. Whilst there was no marked difference in this area, it would appear that the upper ability group boys found it easier than the lower ability group boys.
(7) Boys from both ability sets liked praise, and saw it as an indication of recognition within the subject.

(8) Both sets of boys considered 'being in charge' of a situation within the P.E. lesson as not that important. Although more boys in the lower ability set stated that they liked making the decisions in some elements of the P.E. lesson.

(9) The upper ability set of boys enjoyed asking questions, and thought that it was important in the context of having a good attitude.

(10) Both sets of boys felt that it was important to appear 'happy' and willing to talk in physical education lessons.

It would appear from these findings that there was no significant marked difference between the self image of the two sets of boys.

Both groups held the general opinion that it was important to "look the part" in physical education to be good at it.

It was also indicated by the lower ability set of boys that there was a 'fine line' between being seen as good and having a good attitude in physical education and being a "goody goody" or "creep". This is significant, because in areas such as being able to answer questions, there seemed to be a balance between having a good image, or being able to answer
questions, or being a "know all".

To summarise then, it seems that the self image a pupil holds is an important influence on the children's attitude towards physical education and physical activity.

However, it would appear that this is more of an issue for a smaller section of the boys, particularly the lower ability group.

5.3. THE PHYSICAL EDUCATION CURRICULUM AND RELATIONSHIP TOWARDS BOYS' PERCEPTION OF PHYSICAL EDUCATION.

It has been stated on several occasions that it is assumed that boys of this age group have very positive attitudes towards physical education. This report has established this to some degree and shown that a large majority of boys were generally in favour of the school physical education programme.

The main findings of the study show that generally the pupils:-

1. Enjoyed most of the physical activities offered to them in the physical education programme.
2. Thought that physical education was one of the best subjects on the timetable.
3. Enjoyed nearly all aspects of physical education,
especially working indoors.

4. Found that there was an activity that they were particularly good at, and found this very rewarding.

5. Enjoyed working in small groups, and pairs.

6. Stated that physical education was an important subject in terms of fitness and health and a subject in which you could learn new skills.

7. Wished to participate in physical activities when they left school (only 1% pupils stated that they thought they would not participate in physical activity when they left school).

The study does seem to agree with both Allott (1966) and Smallpox (1967) findings that traditional games still tend to take up most of the time in the physical education programme.

Furthermore, the majority of pupils in all year groups indicated that they wanted to be good at physical education, indeed many pupils indicated that they thought that they were generally good at physical education.

It may be that the pupils who are good in particular physical activities and at physical education in general, may gain more satisfaction from their experiences, than the boys that see themselves perhaps as not so good at physical education. And as Moir (1977) states :-

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"Preference for participation in physical activity seems to depend on personal interests or being good at an activity." (51)

The studies findings would seem to indicate similar findings with another variable which could have a bearing; specifically that a number of boys indicated that they could work closely with their friends in physical education.

In addition there seemed to be a definite relationship between the pupils' closest friends interests in P.E. and their own preferences. Many pupils mentioned that they liked physical education because they could work with their friends in a more relaxed, enjoyable environment.

These findings are similar to Heathcote (1988) who stated when talking about girls attitudes to physical education:-

"they could share a laugh in lessons and enjoyed being in a group" (52)
When considering the likes and dislikes in the physical education programme the following areas were described as not being liked by the boys:-

1. Showers.
2. Working with the girls.
3. Going out in the cold.
4. Some aspects of the aesthetic elements of the curriculum.

A great number of the boys disliked having showers and saw it as being "traditional" to be made to go in them, and was quoted by several boys as being one of the things they most disliked about physical education lessons.

The majority of pupils described their likes as follows:
1. The vast majority of boys enjoyed physical education.
   Only 11% said that they did not like the subject.
2. Many of the pupils enjoyed many of the activities in P.E.
3. Generally speaking they found physical education fun, and enjoyable.
4. Their favourite activities were soccer, basketball and gymnastics.
5. They felt that physical education kept them fit and healthy.

Although there seemed to be overwhelming evidence that the majority of boys enjoyed physical education, many of the pupils stated that the physical education programme could be improved in the following ways:

1. That they would prefer to work inside more when the weather outside was particularly cold.
2. That they felt that they should have more physical education and that it should last longer.
3. That they would like less mixed lessons, particularly when they are doing games activities.
4. That they would like to choose their own P.E. kit.
5. That they would like to see less variety in the programme and have more games activities as opposed to more aesthetic activities such as dance.
6. That they should not have to have showers.
7. That P.E. teachers should not shout as much.

Generally speaking the boys thought that physical education was an important subject and that some of the reasons given were; that it kept you healthy and fit and that it was really good fun to do.

This would substantiate findings by Scott (1980) who
suggested that health and fitness was important to pupils as a reason for doing physical education.

It would also substantiate the notion that some authors have, that pupils who enjoy physical education were usually the ones that found success in the subject. Moir (1977) had found a similar conclusion in her study, the author stated that:-

"...it seems to be true that children who are good at physical activity enjoy it more". (53)

And that many pupils knew which subjects they were not so good at and this, had an important effect on their preference for an activity.

5.3.1. To summarise then, it seems that the content of the physical education programme had an important influence on the children's attitudes towards physical education. A similar finding may be referred to in Figley's (1985) study, which showed that the content of the physical education programme was ranked first in order of main influencing factors in determining school children's attitudes towards physical education.
In addition it was clearly evident that a number of activities in which the pupils participated during their spare time did not relate to the physical education programme in schools. Furthermore, the General Household Survey indicated that the most popular activities favoured by children during their spare time in this age range group were: walking, swimming, jogging and cycling.

This confirms the author's findings from the pilot questionnaires, with the addition of the importance of the pastimes and hobbies, which also seemed to be more significant than the other activities.

It is apparent that the boys are still very keen on the traditional major game of soccer, but other than this activity, do not participate in any other of the major game activities. If we are to see the school as a major influence on the encouragement of leisure interest as a lifelong activity then the findings of the study have important implications for the future planning and content of physical education programmes.
5.4. TEACHER INFLUENCE AND ITS RELATIONSHIP TOWARDS BOYS' PERCEPTION OF PHYSICAL EDUCATION.

The majority of pupils in the study generally stated that they thought they got on with their physical education teacher. Only a small percentage of the upper set pupils said that they did not get on with their P.E. teacher, although there were a larger percentage of the lower ability pupils who stated that they did not get on with their P.E. teacher. However, a number of children in the lower ability group reported that they did get on with their P.E. teacher or were somewhat unsure. In observations evidence suggested that in the previous weeks these results may have been effected by a temporary 'stand in' P.E. teacher who had a 'aggressive teaching style' in comparison to that they were used to. It follows therefore that these results should be viewed with some caution.

It seemed evident that many pupils felt very strongly about this situation and supports the findings in the study that many pupils valued a stable relationship with their physical education teacher and any other conflicting situation could be the cause of the development of poor attitudes.

Generally, both sets of pupils seemed to indicate a favourable attitude towards their physical education teacher.

It would appear that the majority of both sets of boys
feel that their P.E. teacher tries to make the lesson fun, and in conversation with both groups this was seen generally because of the teaching styles adopted by their P.E. teacher which was often more relaxed, less formal and more task setting and challenging in terms of activities within the lesson. A comment often used by both sets was:

"You can have a laugh with the P.E. teacher."

The main findings of the study showed that generally the pupils:

(1) Expressed a feeling that they do "get on" with their P.E. teacher.
(2) Found that P.E. teachers made the lesson more fun and enjoyable.
(3) Stated that P.E. teachers work you hard.
(4) Enjoyed a firm and controlled atmosphere that many P.E. teachers created.
(5) Felt that they were definitely encouraged by their P.E. teacher.
(6) Stated that sometimes P.E. teachers can be too strict and give the impression of "picking on you" if you are not trying.
(7) Enjoyed the P.E. lesson and were of the opinion that P.E. teachers do not make the lesson boring.

There is evidence from the results that the influence of the teacher on the pupils was quite significant, but as the pupils get older, this influence becomes less marked.

It may be argued that as the pupils get older, they become more uncertain as to whether or not their teacher, tries to make the lesson enjoyable, looks unfit and unhealthy, tries to encourage them, understands them as individuals and is good fun. Furthermore, it could be argued that as the pupils get older there may be more of a marked difference between the two ability sets with pupils in the upper band becoming less disaffected and more likely to attend P.E. lessons on a regular basis.

However, generally speaking the boys were very positive about how they 'saw' their P.E. teacher and felt that the way that he encouraged them, the flexibility within the lesson, and the confidence they gained from the subject, made him one of the most influential members of staff in the school.

The findings of this study seem to relate to previous literature which indicates that the physical education teacher may have an important influence on pupils' attitudes towards
Mason (1965) states that there is a need to change pupils' attitudes from a less desirable to a more desirable one and concludes that the teachers approach is very important, in that he or she should adapt and meet the social and physical conditions in which positive attitudes may be developed.

Mancini (1976) goes on to say that pupils who are involved in the decision making process within the physical education programme demonstrate more favourable attitudes than pupils not involved in decision making. This study seems to agree with Mancini's view that teaching styles and approaches seem to affect pupils' attitudes towards physical education.

In addition Morris (1985) states that a teacher's enthusiasm and approach towards a class produces a warm and pleasant atmosphere and that a pupil's response is likely to be favourable.

Finally Figley (1985) adds that the teacher has a
important influence on both positive and negative attitudes of pupils towards physical education. The author goes onto say that positive attitudes are determined by the teacher's reinforcement, personality, teaching and helping; and negative attitudes are determined by the teachers' lack of reinforcement, personality, level of equity and fairness.

It would seem evident from the responses of both sets of boys that the physical education teacher does influence the attitudes of the pupils towards both physical education and to a lesser degree physical activity. That a favourable teacher will play an effective role in stimulating and encouraging the pupils to actively participate in the lesson and a less favourable teacher may promote the opposite effect. This fact is evident from some of the answers given by the lower ability group boys who had a "stand-in" teacher at the time of the research.

The majority of the boys in both ability sets indicated that they had favourable attitudes towards their physical education teachers and this may be reflected in the very positive comments of both groups relating to that they liking and enjoying their physical education lessons.
5.5. ACTIVITY PATTERNS AND ITS RELATIONSHIPS TOWARDS BOYS PERCEPTION OF PHYSICAL EDUCATION.

It would seem from the results of the activity patterns of the boys that the physical education programme does not have as marked effect on the activity practices of the majority of boys, as we as teachers would think.

The study has indicated that even this category of boys are not as physically active as perhaps has been previously assumed and this fact is backed up by reviewing the literature.

"are we reaching pupils in such a way that they want to participate or are we creating barriers and turning people off being physically active."(54)

The main findings from this section indicate:-

(1) The physical education programme has some influence on the physical activity patterns of some of the boys, particularly in relation to the major games.

(2) Approximately half of both sets of boys saw themselves as being active rather than being involved in a
pastime or playing on their computer. This fact being
influenced by boys mainly playing soccer for the school or
playing for an outside club.

(3) The majority of pupils from both ability sets saw
themselves as being active and being "players" rather than
"spectators". Of the boys that did say they saw themselves as
being inactive the majority were from the lower ability group.

(4) Some of the boys from both ability sets saw
themselves as being physically active but this tended to be in
relation to activities such as cycling and skateboarding and
not activities that linked to work being undertaken in the
physical education lesson.

(5) The majority of both sets of boys looked forward to
the P.E. lesson, with only a few not taking part because of
"bringing a note". A minority of boys in the upper ability group
did have an excuse to miss physical education lessons but saw
this as genuine and wanted to get back to participating as soon
as possible. This was also the case with the lower ability
group boys.
(6) During the P. E. lesson the vast majority of boys from both ability sets felt that they would assume "roles" within the lesson that encouraged activity. They did not mind having responsibility and saw the idea of being "team captain" as prestigious. However, a sizable proportion of the upper ability boys saw themselves as being chosen last in a situation where teams were being "picked". In contrast this was not the case with the lower ability set of boys. This could be observed in the P.E. lessons were many of the lower ability boys had a very positive and determined attitude to playing games.

(7) The majority of boys from both ability sets stated that they thought they were active in the physical education lesson and that this could influence their attitude to what types of activities they did in their leisure time. They felt that generally they worked hard in physical education and that was how they preferred it.

5.5.1. Summary

It would seem from the results of the study that the Physical Education programme does have an influence on the attitudes of both sets of boys. That this influence is sometimes reflected in what activities the boys do in their
spare time (which seemed to be the major game of soccer). That some of the boys are active but in activities, such as cycling which are not directly linked with the physical education programme. That many boys felt they were active in physical education lessons but for some this was not reflected in their leisure time as they preferred to play on computers or watch television.

5.6. A SUMMARY OF HOW THE WORK RELATING TO BOYS' PERCEPTIONS OF PHYSICAL EDUCATION MAY BE DEVELOPED OR UTILISED.

5.6.1 THE PUPILS SELF PERCEPTIONS

The findings of this study showed generally that the boys perceived themselves as being happy, healthy, independent and liked doing physical education. Furthermore, a large majority of pupils indicated that they liked to be good and succeed in physical education, with most of the boys from both ability groups saying that they felt that they were good at physical education. Some of the boys from both sets stated that they thought they were good at a particular activity which was generally soccer, basketball or gymnastics.
In some cases the results were not clear as to how the pupils regarded their own ability in physical education, but further discussions with the boys showed that they were aware of their ability in physical activities, and certain team games. In many of the boys who described themselves as being good in physical education were interested in the traditional game activities (i.e. soccer and cricket) and also represented the school at such activities. It may be argued that pupils who are good and enjoy traditional games activities can demonstrate a better self perception than pupils who are not involved with such games.

The majority of boys from both ability groups preferred working in either pairs or small groups. Furthermore, the findings indicated that the boys thought that body image, being competitive, taking the part, being outgoing and talkative were all important factors in having favourable attitudes to physical education. Further discussions with the boys indicated that they liked being chosen for an activity, showing work to the rest of the group and working in large groups.

To summarise therefore, the majority of the pupils indicated that they liked to be good and succeed in physical
education. Many of them liked to be encouraged by their teacher and liked praise for the work they did and saw it as recognition of excellence within the subject. Many of the pupils indicated they liked working with their friends and their favourite activity was related to their friends choice. Most of the pupils from both ability sets described themselves as being happy, healthy and enjoying physical education lessons. They thought that physical education lessons would keep them fit, liked attention and enjoyed asking questions within the context of the lesson. Most of the boys stated they liked competition within the activities and liked being in charge in some game situations. The majority of the boys said they liked activities such as soccer and basketball the best, even though in general they preferred to work inside.

5.6.2 THE PHYSICAL EDUCATION CURRICULUM

The author would like to point out that some of the findings of the study do relate to previous studies undertaken in the area of examining children's attitudes to physical education. However, as has been previously mentioned in the study there is far less information on the attitudes of boys towards physical education than that of the attitudes of girls.
Indeed research into the difference in attitudes to P.E. and P.A. between two ability sets of boys in the same school is virtually non-existent. Thus, many of the findings are specific to this study and can be only seen in this context. However, there still seems to be a significant amount of important data that specifically relates to boys between the age of 11 to 13. Although the general conclusions from the study implies that the great majority of the pupils liked physical education, and that most of them would continue to participate in physical activity in their leisure time, it was not always reflective of the physical education programme.

However, there was a wide sense of consensus that they would continue to participate in physical activities after leaving school.

The findings indicate that a large majority of the boys were satisfied with many aspects of the physical education programme, including the physical activities, the teachers approach (with the exception already outlined), the P.E. kit, the showers, their self-esteem and self achievement.

As the majority of the pupils from both ability groups indicated that they enjoyed physical education, that it was interesting, and an important subject to them, it maybe argued
that not enough evidence was found to support the view, the pupils' needs and perceptions towards physical education changed within the two ability sets. It may be that differences might apply in general education terms between schools of differing stature i.e. a Grammar School and a Comprehensive School. However, after discussion with the pupils, the author suspects that the differences in attitudes to Physical Education and Physical Activity between the pupils may not be as obvious.

There was some relationship in terms of the schools physical education programme and the type of activities which the boys participated in their spare time. Whereas the schools physical education programme was dominated by traditional major games, the most popular physical activities participated in by the boys were, soccer, basketball, badminton, and cycling. Furthermore, only a half of the boys participated in a major-team sport in their spare time.

There was no real evidence that the boys were particularly self conscious and tended to have a "happy go lucky" type of attitude with little concern at this time to their self image. Both sets of boys had a good self image, although the boys in the upper ability set seemed a little more positive in how they viewed themselves. The pupils thought that being fit and looking fit was an important element in being 'good' at
physical education.

The majority of boys insisted that their favourite activities were soccer, basketball, x-country and athletics but would like the opportunity to try other activities like swimming and aerobics. In addition the majority of pupils stated that they did not like going outside in the cold weather, that they should have more P.E. with longer lessons, that there should be smaller group sizes and that they should not have to have showers. Many of the boys did not like mixed lessons and preferred to work in single sex groups, rather than alongside the girls. This could have been as a result of doing P.E. in single sex groups for the majority of time, but equally it highlights the work to be undertaken on gender issues if mixed P.E. is to be undertaken.

If the schools physical education programme is to cater for all its pupils needs through an awareness of the boys likes and dislikes, differences in self awareness, and lifelong educative requirements of the young person, then it may be argued that it is important to study boys perceptions of physical education and consider how the boys are influenced in their perceptions.

It seems evident from this study that the content of the
physical education programme may not influence the boys' perceptions to as large an extent as we may think and that other important factors may affect the pupils attitudes to physical education.

This would suggest that there may be a need for educationalists to study in greater detail the content of the physical education programme and its influences on pupils' attitudes to physical education.

5.6.3. THE TEACHER

The results of the study indicated that the majority of the pupils from both ability sets generally had favourable attitudes towards their physical education teachers. It may be argued that one of the reasons for this could have a relationship to the high percentage of boys from both ability sets who stated they enjoyed physical education.

Apart from the situation where the lower ability group of boys had a 'stand in' teacher for a period of time and found it difficult to 'get on' with him, the majority of the boys particularly in the upper ability group had a good relationship with their teacher.
It may be argued therefore, that the pupil/teacher relationship is one of great importance, as the evidence in the study shows that the physical education teacher may influence their pupils attitude towards their subject. Although the study did not examine the relationship between the teacher and the pupil in great depth, the discussion and observations made with the boys indicated that they thought the teachers personality and style of teaching was important to them. This was highlighted by the responses of the boys in the lower ability group who made more negative comments in relation to the temporary teacher, who they did not like and whose personality, obviously influenced their attitudes towards some aspects of the subject.

The author would suggest that the influence of the teacher could be one of the most influential factors in forming pupils attitudes towards physical education and would therefore, warrant more detailed research in the future.

The study cannot make comment on other research which has found a decline in positive attitudes to the teacher with age. (Heathcote 1988.) But would tentatively suggest that boys
in this age group would generally show very positive attitudes towards their P.E. teacher. Some of the pupils did indicate that P.E. teachers did not make the lesson interesting, picked on them if they were not good at physical education, and put them off physical education. However, the majority of boys indicated that the physical education teacher tried to make the lessons enjoyable, did not put them off physical education, were not too strict, did not look unfit and unhealthy, tried to encourage them, made the lessons interesting and were good fun to be with.

Further discussions with the lower ability group pupils, revealed that some pupils were discontent with physical education teacher's methods and styles of teaching. They found him particularly aggressive and loud, which definitely resulted in a unfavourable relationship with their teacher. The boys indicated a desire to express their feelings more, have less formal direction by the teacher and have more say in decision making within the physical education lesson. This was not so much the case with the upper ability group boys who liked more the personality and teaching style of their teacher.

To summarise this section, the majority of the boys had favourable attitudes towards their physical education teacher.
and this may be a reflection of their positive attitudes towards physical education generally. However, it was shown that variables like having a 'stand in' teacher can influence greatly the attitudes of some pupils. Therefore it may be of importance to physical educationalist to be aware that the practices adopted by some schools in terms of temporary/supply cover of teaching staff could have a marked effect on the attitudes of pupils to the subject. Also as pupils get older their interests and needs change. Consequently, further research is required if physical education teachers are to become fully aware of the detailed reasons behind the pupils evident change in needs and interest, as this may influence their attitudes towards physical education.

5.6.4. ACTIVITY PATTERNS

It has been established by the findings of the study that the physical education programme does not influence the activity patterns of pupils to a major extent. The study also indicated that even boys of this age may not be as active in their leisure time as teachers would think. With many of the boys being involved in 'pastimes' rather than vigorous physical activity.
However, boys from both ability sets were involved in some traditional games which mainly tended to be soccer. When questioned the boys did think that they were active even though this was largely due to participating in such activities as cycling and skateboarding. The pupils from both ability sets did state that they would rather be 'participants' than 'spectators'.

It would seem that there are certain areas of development within the physical education programme that could influence greater participation:

(a) A wide variety of activities which are not just related to the traditional major games. (Although boys from both groups enjoyed the "games" within the P.E. programme.)

(b) Concentration on some individual activities (such as badminton and table tennis) which can be found at local sports facilities.

(c) Development of certain elements of outdoor activities which are easy to participate in and need the minimum of equipment: (i.e. orienteering)
(d) Encouraging parents to be active with their children and take part in some of the sporting events they choose.

(e) Allowing pupils to make more decisions in the physical education lessons, thus, developing a sense of 'ownership' of some of the activities. Not being "totally directed", given more scope for choice or experimentation within the activity.

To summarise this section, it would appear that the boys from both ability sets were not as active as one would think choosing to be involved in pastimes and activities such as cycling rather than activities which reflected the physical education programme. However, some of the boys did play soccer, but not games such as badminton and tennis. With this in mind there is no doubt that physical educationalists should be looking to widen the scope and context of the physical education programme so as to encourage activity in pupils spare time.
5.7. OBSERVATIONS ON TWO ANALYTICAL PROCEDURES

During the collection of data it became apparent that the development of a questionnaire that suited the reading age and ability of the pupils was vital to the collection of information.

The author did not want to rely too heavily on interview procedures and therefore developed the 'Brainteaser Questionnaire' as a means of collecting the pupils opinions, with accuracy and a certain degree of validity.

One of the major criticisms is the ability of readers to interpret transcripts with accuracy. To test this, two experienced teachers were asked to rate the responses of pupils to Self-Image, Attitudes to P.E., Perceptions of the P.E. Teacher and Activity Patterns questions in line with the scoring system of the Brainteaser.

The main conclusions from the two analytical procedures were:

(a) The Brainteaser correlated highly with the more experienced teacher assessor, and demonstrated
considerable validity.

(b) The Brainteaser could be reasonably used in isolation as a broad predictor of these categories of attitude and behaviour, and in combination with interviews would give confidence in interpretation.

(c) The Brainteaser did have some agreement with responses of the children's comments by the teachers.

(d) The Brainteaser did have an ease of use—which would make it particularly effective with low ability pupils.

To summarise, the Brainteaser Questionnaire seemed to be a reasonably valid means of collecting data from low ability pupils in schools. It has an ease of use and can be used with confidence within a research situation. However, it would seem that a combination of questionnaire type questions and interview interpretation should be used to examine the differences between groups.
5.8. IDENTIFICATION OF THE LIMITATIONS AND SUGGESTED DESIGN IMPROVEMENTS FOR THE STUDY.

It is realistic to assume that the study of 120 boys from one school in the 11-13 age group may not be as comprehensive as a study which examines children's perceptions of physical education and physical activity, from a wider range through a larger sample in a comprehensive number of schools. However, the limitations of the study may be recognised as the following:

1. The study was carried out in one co-educational school.
2. The use of a combination of P.E. teachers and their relative contacts with the boys in the different ability bands may have influenced their opinion of the teacher.
3. The major part of the data was collected from January to March when the weather conditions and changes may have influenced the pupils' views.
4. The data was collected at no set time during the day or week.

Generally most of the pupils enjoyed participating in the
study and filling in the Brainteaser Questionnaire which they thought was "really good fun". They were also keen to hear the outcomes of the questionnaire, and in particular to see what the consensus of opinion was amongst all the pupils in the school.

The relationship between the majority of the pupils and the researcher seemed to be favourable, some pupils may have been influenced by their feelings towards the researcher in a positive way (i.e. attempting to give correct answers, pleasing the researcher) or negative way (i.e. attempting to give false answers, trying to displease the researcher).

The design of the study may be improved therefore by taking into consideration all of the previously outlined limitations with a view to ;-:

1. Increasing the size of the sample.
2. Collecting data over a longer period of time.
3. Increasing the number of pupils to be involved in the designing the methodology of data collecting.
4. Interviewing more pupils.
5. Controlling teacher influence.
5.9. GENERAL CONCLUSIONS AND SUGGESTED EDUCATIONAL IMPLICATIONS FOR FUTURE CURRICULUM PLANNING AND DEVELOPMENT WITHIN THE AREA OF PHYSICAL EDUCATION.

This study has suggested that boys aged between 11 and 13 tend to have favourable attitudes towards physical education. Their perception of physical education is that it is enjoyable, interesting important to them and that the majority of boys felt that they would continue to participate in physical activity when they leave school.

The boys also were really interested in completing the 'Brainteaser Questionnaire' and enjoyed it far more than the two previous questionnaires. The author feels that the development of more relevant and realistic methods of data collection other than interview should be highlighted, especially for lower ability boys. This may ultimately result in more pictorial 'instruments' based on the pupils own experience and interest. The author would also point out that the Brainteaser shows the importance of this in future data collection methods.

Although at first there seems to be a indication of strong satisfaction with Physical Education the results would indicate that pupils are not just influenced by 'what' they are taught but 'who' they are taught by, with a very strong
indication that positive attitudes developed by the pupils are often as a result of a positive approach by the teacher.

Not only have we to look to develop physical educational programmes in the light of the National Curriculum, but also lay emphasis on the teacher's ability to make the lessons enjoyable, interesting and of worth to the pupils.

Many of the pupils stated that they favoured the indoor activities, and enjoyed working in small groups and working with their friends. The boys enjoyed competitive situations especially team games and activities such as X-country.

The majority of both sets of boys liked to be good at physical education, although this was not as important as taking part and enjoying the lesson. Many of the boys felt that they had to work hard at physical education to be good at it.

There appears to be no significant difference between each ability group. Thus, concluding that at this age range the positive aspects of Physical Education transcend any negative attitudes associated with attitudes to school of the lower band pupils.

Although the pupils parents seemed to have an important
influence on their children's attitudes towards physical education, particularly the parents of the upper band set, the pupils' friends became more important with the influence of the teacher becoming the most important factor of all.

The implications for any future planning of the physical education curriculum may be for educationalists to promote the need for greater awareness of pupils' perceptions and interests. A wider range of activities with more decision making by the pupils in lessons and more activities presented in a less direct manner by the teacher, are necessary.

No doubt the advent of the National Curriculum should initiate this process and offer to children of all ages and abilities the opportunity to maximise their potential in an exciting, challenging and enjoyable environment. And as Ian Beer, the chairperson for the working group that produced the National Curriculum guidelines states in a letter to Kenneth Clarke (21/12/90) :-

"A well taught and comprehensive programme of physical education throughout a pupils' time at school conveys long-term benefits including lifelong participation in physical activities and improved long term health as a result of regular exercise."(56)
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(28) As Above.

(29) As Above.

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Appendix 1.

WHAT DO YOU THINK?
(Physical Education Brainteaser)

NAME .................................................................

AGE ........................................................................

SCHOOL ....................................................................

FORM/CLASS ................................................................

BOY/GIRL ......................................................................

What do you think about Physical Education? This Brainteaser tries to find out your opinion of Physical Education, Physical Activity and yourself. There are no right or wrong answers — just give the answers that suit you.

Have fun.

SECTION ONE

Please show the answer which best suits your character by drawing a line from the ball to the pocket. You are allowed two goes but you have to pot one ball on either side of the table.

Example

1.

2.

3.
SECTION TWO

The following questions are about your P.E. lesson. Draw the man on the step which best suits what you think.

Example

How do you feel when you know you have to shower after the lesson.

1. How do you feel when it is time for your P.E. lesson?

2. It is an indoor lesson how do you feel?

3. It is an outdoor lesson how do you feel?
4. It is a mixed P.E. lesson (Girls & Boys) how do you feel?

5. How would you feel if you could choose what P.E. Activities you did in your lesson?

6. How do you feel when you know you are not very good at P.E.?

7. How do you feel when you are doing the following activities:
   (a) Soccer
   (b) Swimming
   (c) Basketball
   (d) X-country
   (e) Gymnastics
SECTION THREE

On the Dartboard put a X to show where your arrow would land. Only one 'throw' is allowed on each question.

Example

Your P.E. teacher makes you laugh?

1. Do you think you get on with your P.E. teacher?

2. Do you think you get on with other P.E. teachers?

3. P.E. teachers try to make the lesson fun?

4. P.E. teachers try to work you too hard?

5. P.E. teachers are too strict?

6. P.E. teachers look unfit and unhealthy?
7. P.E. teachers try to encourage you?

8. P.E. teachers pick on you if you are not very good?

9. P.E. teachers make lessons boring?

10. P.E. teachers try to make lessons interesting?
SECTION 4

Look at the cartoon strip below.
Put a tick next to the boy who is doing what you would do in the same situation.

Did you enjoy answering these questions .................
RESULTS FROM PILOT QUESTIONNAIRE INTO ACTIVITY PATTERNS

Fig 1. Percentage of pupils involved in pastimes

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organised Sport/Games</td>
<td>18.8%</td>
</tr>
<tr>
<td>Passtimes (i.e., snooker, pool, darts, computers)</td>
<td>62.2%</td>
</tr>
<tr>
<td>Sport/Games with parents</td>
<td>7%</td>
</tr>
<tr>
<td>Bike riding</td>
<td>12%</td>
</tr>
</tbody>
</table>

(Sample of 80 boys)
Fig 2. Analogical Image: Snooker Table
Fig 3. Analogical Image: Man on Stairway
Fig 4. Analogical Image: Dartboard
SECTION 4

Look at the cartoon strip below.
Put a tick next to the boy who is doing what you would do in the same situation.

Did you enjoy answering these questions ........................

Fig 5. Analogical Image : Cartoon Strip
Appendix 2.

**PHYSICAL EDUCATION QUESTIONNAIRE**

This questionnaire is designed to find out your views on your Physical Education programme.

Your answers will be treated as confidential.

Please fill in the following:

NAME .................................................................

AGE

SCHOOL .................................................................

YEAR

BOY/GIRL

DATE: DAY ...... MONTH ...... YEAR ...... (e.g. 11.1.86)

Please answer the questions in order in which they are given.

<table>
<thead>
<tr>
<th>Choose one from the 3 faces. Please tick which face sums up your views on the following questions.</th>
<th>Dislike</th>
<th>Not bothered</th>
<th>Like</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How do you feel when it is time for your P.E. lesson?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Indicate how you would feel when you are actually in your P.E. kit?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Indicate how you would feel if you could choose what P.E. kit you wore.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. It is an indoor lesson, how do you feel?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. It is an outdoor lesson, how do you feel?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. It is a mixed P.E. lesson (boys and girls) how do you feel?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. How would you feel if you could choose what P.E. activities you did in your lesson?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. How do you feel when you know you will have a shower after the lesson?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. How do you feel when you know you will be working in a large group?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

262
Section Two Cont...
5. What do you like about your P.E. lesson? ..........................................................

6. What do you dislike about your P.E. lesson? ..........................................................

7. Which physical activities do you take part in in your spare time?
..........................................................................................................................

SECTION THREE
Please answer YES or NO to the following questions. Please tick one box only.

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you enjoy P.E.?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Would you say you were generally good at P.E.?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Do you 'get on' with your P.E. teacher?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Do you enjoy working with your friends?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Do your parents encourage you to do well at P.E.?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Do your parents take part in physical activity in your spare time?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Do your parents encourage you to do physical activity in your spare time?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Did you enjoy P.E. at your junior school?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Dislike</td>
<td>Not bothered</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>---------</td>
<td>---------------</td>
</tr>
<tr>
<td>10. How do you feel when you know you will have to show a piece of your work?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. How do you feel when you think you are not very good at a particular activity?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. What is your face when you are doing the following activities?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Swimming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Hockey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Badminton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Health &amp; Fitness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Soccer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Basketball</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) Cross-country</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) Gymnastics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Athletics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j) Aerobics</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SECTION TWO**

Please think carefully about the following questions and answer as clearly as possible.

1. Why do you think you do P.E. in school?

2. Do you think P.E. is an important subject? Give reasons for your answer.

3. List in order of preference your five favourite sports.
   a) 
   b) 
   c) 
   d) 
   e) 

4. Why is your answer to question 3(a) your favourite sport?
SECTION FOUR

Which of the following statements do you agree or disagree with? (Please circle one number only)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. P.E. helps you keep fit</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. There is too much emphasis on being good at P.E.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3. P.E. helps you feel healthy</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4. Doing well in P.E. helps you make friends</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5. Doing P.E. helps you feel good</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6. P.E. helps you to know what the body is capable of</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7. P.E. makes you strong</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8. Generally P.E. teachers are too strict</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9. P.E. is enjoyable if you are good at it.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10. Generally P.E. teachers are enthusiastic and fun to be with.</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Thank you for completing this questionnaire.
Appendix 3.

**PHYSICAL EDUCATION QUESTIONNAIRE**

This questionnaire is designed to find out your views on your Physical Education programme.

Your answers will be treated as confidential.

Please fill in the following:

NAME ...............................................................

AGE ..........................

SCHOOL .................................

YEAR ............................

BOY/GIRL ......................

DATE: DAY...... MONTH ...... YEAR ...... (e.g. 11.1.86)

Please answer the questions in order in which they are given.

<table>
<thead>
<tr>
<th>Choose one from the 3 faces. Please tick which face sums up your views on the following questions.</th>
<th>Dislike</th>
<th>Not bothered</th>
<th>Like</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How do you feel when it is time for your P.E. lesson?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Indicate how you would feel when you are actually in your P.E. kit?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Indicate how you would feel if you could choose what P.E. kit you wore.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. It is an indoor lesson, how do you feel?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. It is an outdoor lesson, how do you feel?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. It is a mixed P.E. lesson (boys and girls) how do you feel?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. How would you feel if you could choose what P.E. activities you did in your lesson?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. How do you feel when you know you will have a shower after the lesson?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. How do you feel when you know you will be working in a large group?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. How do you feel when you know you will have to show a piece of your work?  

11. How do you feel when you think you are not very good at a particular activity?

12. What is your face when you are doing the following activities?  
   a) Swimming
   b) Hockey
   c) Badminton
   d) Health & Fitness
   e) Soccer
   f) Basketball
   g) Cross-country
   h) Gymnastics
   i) Athletics
   j) Aerobics

**SECTION TWO**

Please think carefully about the following questions and answer as clearly as possible.

1. Why do you think you do P.E. in school?

2. Do you think P.E. is an important subject? Give reasons for your answer.

3. LIST in order of preference your FIVE favourite sports.
   a)  
   b)  
   c)  
   d)  
   e)  

4. Why is your answer to question 3(a) your favourite sport?
Section Two Cont.

5. What do you like about your P.E. lesson? ..........................................................

6. What do you dislike about your P.E. lesson? ..........................................................

7. Which physical activities do you take part in in your spare time? .........................

SECTION THREE

Please answer YES or NO to the following questions. Please tick one box only.

<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you enjoy P.E.?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Would you say you were generally good at P.E.?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Do you 'get on' with your P.E. teacher?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Do you enjoy working with your friends?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Do your parents encourage you to do well at P.E.?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Do your parents take part in physical activity in your spare time?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Do your parents encourage you to do physical activity in your spare time?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Did you enjoy P.E. at your junior school?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### SECTION FOUR

Which of the following statements do you agree or disagree with?

*Please circle one number only*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. P.E. helps you to keep fit</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>2. There is too much emphasis on being good at P.E.</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>3. P.E. helps you feel healthy</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>4. Doing well in P.E. helps you make friends</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>5. Doing P.E. helps you feel good</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>6. P.E. helps you to know what the body is capable of</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>7. P.E. makes you strong</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>8. Generally P.E. teachers are too strict</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>9. P.E. is enjoyable if you are good at it</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>10. Generally P.E. teachers are enthusiastic and fun to be with.</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
</tbody>
</table>

Thank you for completing this questionnaire.
Appendix 4.

Face Sheet

Interviewers Name........................................Number..............
Date of Interview..............................................
Place of Interview.............................................
Sex.....................
Age.................
Education..........................
Form / Set...................
Lesson...........................
Period.........................
Involved or Absent.................................
Appendix 6
Typical Day Weeks 1-3

The majority of the time spent during these weeks was in observation of the boys who would be completing the questionnaires. These observations were made not just during the P.E. lesson, but also during the Maths, English and Special Needs lessons. The purpose of this was to give the author a 'feel' of what it was like to be in the school, the atmosphere that existed, and the relationships between the boys.

Whilst observing the upper ability group in both Maths and English, it was noticeable that the boys were generally very co-operative, within the lessons with the boys asking and answering questions. The mood of the lessons was usually very good, although the enthusiasm for the subject from some individuals was minimal.

During the physical education lessons the same group were very positive, and a lesson they looked forward to.

The lower ability group of boys were also observed in Maths and English, were the attitude to the subject was not as positive. However, some of the boys did enjoy the subjects. The majority of the time spent in observation of the lower ability group was in 'remedial' lessons where they were taught by a special needs teacher. It was interesting to note that certain individuals were always in trouble and became 'high profile' in terms of their poor behaviour.

In P.E. lessons however, the group became very much more positive with many of them working hard and giving the impression of enjoying themselves. They seemed to co-operate more with each other and show less behavioural problems, such as shouting out or 'messing around'.
Appendix 7.
Typical Day Weeks 4-6

During these weeks the author was still involved with making general observations relating to both ability sets of boys, but now especially in relation to P.E. lessons.

It had already been established in observations from the previous weeks that both sets of boys, in general, really enjoyed physical education. However, on closer inspection certain elements began to appear :-

(1) The lower ability group were finding a 'stand-in teacher' a problem in terms of "getting on with him."

(2) The upper ability group seemed to demonstrate a really positive attitude to their P.E. teacher.

(3) Certain boys in the lower ability group were very dominant in their 'position' within the class. With two boys in particular making all the decisions.

The author at this stage in the research issued the first of the pilot questionnaires, to the first year boys. (11-12 year olds)

It was interesting to note that the boys from both ability sets took a keen interest in completion of the questionnaires when they were informed of this by the P.E. teacher.

Both sets of boys needed help in completing the questionnaires and the author had to carefully read the questions out to them. The lower ability set of boys tended to need more help at this stage and often asked more questions.

At the end of this period Pilot 2 was issued with a helper in data collection noted a better response in terms of completing the Questionnaire.
Appendix 8.
Typical Day Weeks 6-10

During these weeks of observation the author noticed a distinct acceptance of his presence by both sets of boys particularly the lower ability boys, who had questioned his intentions in the early weeks.

The author recorded a feeling of 'comfort' in working with the groups, with a real feeling of being 'natural' within the class environment.

During this period the boys asked many questions of the author, such as:

"Are you a P.E. teacher?, can you teach us P.E. ?

"Can we see the book you are writing , when you have finished it."

" Where is all of this information going to."

The boys from both sets also expressed a liking for filling in the questionnaires and whether they could do anymore.

It was at this point in the research period that the Brainteaser Questionnaire was issued to 20 boys from each ability set.

The author noticed the following points:-

(a) The boys from both ability sets really showed an interest in 'filling in' the Brainteaser Questionnaire.
(b) Some of the boys recognised and identified with some of the situations depicted in the cartoons.
(c) The boys from both groups enjoyed completing the questionnaire.
(d) The author was required to give less instruction on the filling in of the questionnaire.

It was noticeable that the boys from the lower band ability set had just as much enthusiasm as the upper ability boys in terms of wanting to complete the questionnaire.
Appendix 9.
Self Characterisation Essays.

I think I'm quite good at some sports, but I don't think other people think I am. I am good at cricket and swimming. Some of my friends and I are starting an American Football team. They thought I was so good they put me as defender. They call me the Refrigerator Jr. Like the player called the Refrigerator that plays for the Chicago Bears.

I think I am good at some sports but at others am not so good. I am pretty good at some sports and games out side but not so good inside. I can play football, cricket, rugby, and rounders. If they make fun of me I just say to them 'but you couldn't do better yourself', and they are bigger than me I just stay quiet and do not say anything. Sometimes I make up excuses like I meant to do that. Then they just laugh. I don't show off and say that I am the best.
I think that I am good at some sports and not so good at others. I am good at football in the net at least, but I am not very good out. Snooker is the best thing that I am good at. We have got a six foot table and I can beat some of my brothers some times. Tennis I am good at but we haven't got anywhere to play. I go and play at golf on a golf course at Herringthorpe. I am not so good at indoor games except basketball. Like Snooker, football, golf, cricket and basketball.
How I See Myself

I think I am O.K. at games and sports. My best sport is football. I think other people think I am not bad at sports. Myself I think my best sports are football, basketball, cricket, golf and snooker. I also like to run. I watch a lot of sport on TV and I watch Rotherham United. I started playing football for a team three years ago but I have loved football since I was a little baby. I like games at school it is my favourite lesson. The only sports I do not like are Rugby, Bowls and skiing.
How I see myself

I think I am quite good at games. My best sport is athletics, my best races are 800m and 1500m. My worst game I have played is hockey because I run and I have got to protect my legs. Other people think I am quite good at running for my age. I think I am very good. I have got my name in the newspapers a couple times, for coming in the first ten. I see myself quite a good runner because I am 11 and I run against 12 and 13 year olds so I am at the bottom of my age group.
12th Feb.

How I see myself.

I think that some games I play I play well. I think my best sport is snooker. But people think I can not play football. I am good at but I'm not Brill. I try to be myself. And not show-off like people I know. My worst sports are running and swimming. People think I am crap but I do my best for me.
**How I See Myself**

I think that I am fit but some people in our form are a bit fitter than I am. I like games and P.E and swimming but I'd rather do a run because I want to be very fit when I grow up. Mr Hughes (Our P.E. Teacher) said that I am fit but I wish I was as fit as Christopher Grouty because 'he goes to the Rotherham Harriers. My worst sports are Darts and Conker.
### Unpaired t-Test

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Std. Error</th>
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Unpaired t-Test  \( X_1: \text{Upp/Low} \)  \( Y_1: \text{Self Im C} \)

<table>
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<tr>
<th>DF</th>
<th>Unpaired t Value</th>
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<th>Std. Dev.</th>
<th>Std. Error</th>
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<tbody>
<tr>
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<td>3.35</td>
<td>3.281</td>
<td>.734</td>
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<tr>
<td>Upper</td>
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<td>3.8</td>
<td>4.467</td>
<td>.999</td>
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## Unpaired t-Test

X₁: Upp/Low    Y₁: Attn PE BT

<table>
<thead>
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<th>Std. Dev.</th>
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<tbody>
<tr>
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<td>78.35</td>
<td>6.434</td>
<td>1.439</td>
</tr>
<tr>
<td>Upper</td>
<td>20</td>
<td>43.1</td>
<td>5.721</td>
<td>1.279</td>
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### Unpaired t-Test

**X₁**: Upp/Low  
**Y₁**: Atts PE C

<table>
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<tr>
<th>DF:</th>
<th>Unpaired t Value:</th>
<th>Prob. (1-tail):</th>
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<tbody>
<tr>
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<tr>
<td>Lower</td>
<td>20</td>
<td>78.35</td>
<td>6.434</td>
<td>1.439</td>
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<tr>
<td>Upper</td>
<td>20</td>
<td>91.1</td>
<td>12.294</td>
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### Unpaired t-Test

**X₁: Upp/Low**  
**Y₁: Perc T C**

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<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
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<td>2.45</td>
<td>3.531</td>
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</tr>
<tr>
<td>Upper</td>
<td>20</td>
<td>5.05</td>
<td>2.665</td>
<td>.598</td>
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</table>
Unpaired t-Test  \( X_1: \text{Upp/Low} \)  \( Y_1: \text{Perc} \)  \( T \)  \( B_T \)

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<th>Std. Error</th>
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<td>1.424</td>
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<tr>
<td>Upper</td>
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<td>1.25</td>
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<tr>
<td>Group</td>
<td>Count</td>
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<td>---------</td>
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<td>------</td>
<td>-----------</td>
<td>------------</td>
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<td>Lower</td>
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<td>Upper</td>
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<td>5.05</td>
<td>2.665</td>
<td>.596</td>
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</tbody>
</table>
### Unpaired t-Test

**X₁**: Upp/Low  
**Y₁**: Act P BT

<table>
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<tr>
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<th>Unpaired t Value</th>
<th>Prob. (1-tail)</th>
</tr>
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<tbody>
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<th>Std. Dev.</th>
<th>Std. Error</th>
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<tbody>
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<td>2.85</td>
<td>1.981</td>
<td>0.443</td>
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</tbody>
</table>

290
STATISTICAL INFORMATION - STATISTICS ON PUPILS

IMAGE

r Band  +4, +3, +1, +4, +5, +1, +2, 0, +1, -3, -1, +1, 0, +3, +3, +5, +4, -2, 0
r Band  +4, +5, 0, -1, -3, -4, +1, +6, +7, +3, +2, +1, 0, +1, 0, +3, +1, +3, -2, 0

PROGRAMME

r Band  34, 44, 40, 33, 50, 39, 55, 39, 30, 33, 61, 39, 36, 44, 37, 40, 43, 39, 44
r Band  46, 32, 38, 54, 53, 32, 44, 50, 49, 47, 43, 41, 47, 44, 46, 50, 53, 56, 54

TEACHER

r Band  +3, +3, -1, -1, -4, -2, +6, +4, +1, +3, +3, +1, 0, +1, 0, -1, +3, -1, +2, +3
r Band  +1, -2, -4, +1, 0, +1, +2, 0, 0, 0, +3, +2, -3, 0, -1, +1, +4, +3, +2, +3

VITY PATTERNS

r Band  -2, +5, +3, 0, +4, +1, +5, +1, -1, +2, +3, +5, +5, +1, +3, +1, -1, +4, +5, +2
r Band  +2, +2, +4, +1, -1, +5, +6, +5, +5, 0, +3, +1, +3, +2, +3, +1, +1, +3, +1, +4
KEITH EINKS

STATISTICS ON PUPILS

SELF IMAGE
Lower Band  +5,+3,0,+3,+3,-1,+2,0,+1,0,-1,+6,+4,+2,+2,+3,0,0,+1,+2
Upper Band  +6,+2,+1,+4,+3,-2,+7,+3,+7,+2,+4,+1,0,0,0,-1,+3,+4,+1,+2

P.E. PROGRAMME

Lower Band  35,40,34,44,34,37,37,39,36,41,45,36,40,36,35,40,45,41,34,37
Upper Band  54,38,38,52,54,34,50,51,57,37,44,43,40,39,42,38,42,46,39,55

P.E. TEACHER

Lower Band  +2,+3,0,+4,-2,0,+4,+1,-1,+3,+2,+1,+1,+1,+5,0,0,+2,-1
Upper Band  0,-2,-2,-1,+1,+2,+3,+1,-3,-1,-1,0,0,+1,0,+1,-1,+3,+1,-1

ACTIVITY PATTERNS

Lower Band  -1,-5,-4,+3,+2,0,+1,-2,-1,+2,+3,+5,+1,+2,+1,+1,-1,+5,+3
Upper Band  +2,+5,+2,+3,+1,-3,+3,+2,+5,+6,+6,+4,+2,0,0,+2,+5,+4,+1,0

292