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Physical Education: A Picture of Health?
The Implementation of Health-Related Exercise in the
National Curriculum in Secondary Schools in England

by

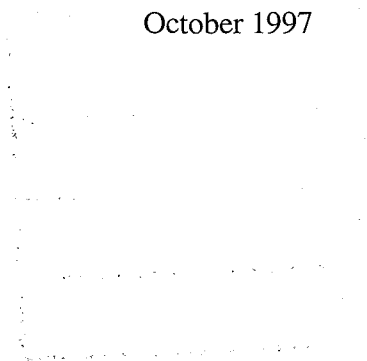
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Abstract

Physical Education: A Picture of Health? The Implementation of Health-Related Exercise in the National Curriculum in Secondary Schools in England

This thesis documents and explores factors influencing the way in which physical education's (PE) contribution to health in the form of health-related exercise (HRE) was viewed, approached and delivered by secondary school PE teachers following the introduction of a national curriculum for physical education (NCPE). The methodology incorporated both quantitative and qualitative approaches. A national survey of 1000 secondary schools in England in 1993 elicited questionnaire responses from 72.8% of heads of PE departments (PE HoDs) from a proportionate sample of schools stratified by type, age range, gender, size, and geographical location. Analysis employed the Statistical Package for Social Scientists (SPSS). Case studies were completed in 1995 in three randomly selected mixed sex state schools in the South, Midlands and North of England. Case study data analysis focused on the progressive identification of themes and concepts associated with the implementation of HRE in the NC. The findings revealed that the NCPE's explicit attention to health issues was welcomed although views varied regarding interpretation, delivery and assessment of the requirements. Most schools had adopted a combination of approaches, involving discrete units and permeation through the activity areas within PE, and/or delivery through other curriculum areas. Consensus existed for some theoretical areas although a physiological bias was evident. There was limited evidence of a well-structured and co-ordinated approach to integrating health issues within the PE activity areas, and that delivered in discrete units often had a fitness-orientation, reflecting adaptation of the performance rationale underlying the 'traditional' games-dominated PE programme. Conceptual confusion prevailed regarding the multi-dimensional concept of HRE, and the varying relationships between PE, sport, health, and fitness. The expression of health issues in the NCPE revealed limitations to the accommodation of HRE, mismatches between intentions and outcomes, and a tendency to reflect inequitable practices. Influences included school and individual characteristics, contextual constraints and prevailing ideologies. Creative interpretation of the NCPE remains possible in the form of innovative programmes which integrate health and PE, and which challenge 'physical fitness' and 'sport performance' orientations. A committed, comprehensive and coherent approach to health issues is rarely a central feature of school PE. Nevertheless, a 'shared vision' of the expression of health in the NCPE clearly remains desirable and possible.

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Abbreviations

ACAC	Awdurdod Cwricwlwm Ac Asesu Cymru (Curriculum and Assessment Authority for Wales)
ACSM	American College of Sports Medicine
ASO	Association for the Study of Obesity
AT(s)	Attainment Target(s)
BAALPE	British Association of Advisers and Lecturers in Physical Education
B.Ed	Bachelor Degree in Education
BCPE	British Council for Physical Education
BUPEA	British Universities Physical Education Association
CAST	Curriculum Advice and Support Team
CATCH	Child and Adolescent Trial for Cardiovascular Health (USA)
CCPR	Central Council of Physical Recreation
CCT	Compulsory Competitive Tendering
CDCP	Centers for Disease Control and Prevention
CHD	Coronary Heart Disease
CRSS	Centre for Research into Sport and Society
CTC	City Technology College
DENI	Department of Education Northern Ireland
DES	Department of Education and Science
DfE	Department for Education
DEE	Department of Education and Employment
DNH	Department of National Heritage
DoH	Department of Health
DOVE	Diploma in Vocational Education
EKS	End of Key Stage
EKSS	End of Key Stage Statement(s)
EKSD	End of Key Stage Description(s)
EPER	European Physical Education Review
ERA	Education Reform Act (1988)
EXA	Exercise Association of England
FITT	Frequency, Intensity, Time and Type (of exercise)
FR	Final Report
GCSE	General Certificate of Secondary Education
GEST	Grant for Education Support and Training
GM	Grant-Maintained
GMS	Grant-Maintained Secondary School

HE	Health Education
HEA	Health Education Authority
HEC	Health Education Council
HEI	Higher Education Institution(s)
HHP	Happy Heart Project
HoD	Head of Department
HMI	Her Majesty's Inspectorate
HBPE	Health-Based Physical Education
HEPA	Health-Enhancing Physical Activity
HEPE	Health-Enhancing Physical Education
HFPE	Health-Focused Physical Education
HPEP	Health and Physical Education Project
HPPE	Health-Promoting Physical Education
HRE	Health-Related Exercise
HRF	Health-Related Fitness
HRPA	Health-Related Physical Activity
HRPE	Health-Related Physical Education
HRPF	Health-Related Physical Fitness
INSET	In-Service Training
IR	Interim Report
IS	Independent Secondary School
ITT	Initial Teacher Training
KFA	Keep Fit Association
KS	Key Stage(s)
LEA	Local Education Authority
LMS	Local Management of Schools
MVPA	Moderate to Vigorous Physical Activity
NASPE	National Association of Sport and Physical Education (USA)
NATFHE	National Association of Teachers in Further and Higher Education
NC	National Curriculum
NCC	National Curriculum Council
NCF	National Coaching Foundation
NCPE	National Curriculum for Physical Education
NCPE WG	National Curriculum Working Group on Physical Education
NJSP	National Junior Sport Programme
NQT	Newly-Qualified Teacher
NSG	Non-Statutory Guidance
NWCPEA	North West Counties Physical Education Association
OAA	Outdoor and Adventurous Activities

OFSTED	Office for Standards in Education
OHMCI	Office of Her Majesty's Chief Inspector of Schools in Wales
PE	Physical Education
PEA	Physical Education Association
PGCE	Post-Graduate Certificate in Education
PoS	Programme(s) of Study
PSD	Personal and Social Development
QTS	Qualified Teacher Status
RSA	Royal Society of Arts
SC	Sports Council
SCAA	School Curriculum and Assessment Authority
SCOPE	Standing Conference on Physical Education in Teacher Education
SD	Standard Deviation
SE	Social Education
SEAC	Schools Examinations and Assessment Council
SEN	Special Educational Needs
SHA	Secondary Heads Association
SoA	Statement of Attainment
SMM	State-Maintained Middle Deemed Secondary School
SMS	State-Maintained Secondary School
SOFIT	System for Observing Fitness Instruction Time
SoW	Scheme of Work
SPARK	Sports, Play, and Active Recreation for Kids (USA)
SPSS	Statistical Package for Social Scientists
SWOT	Strengths, Weaknesses, Opportunities, Threats
TVEI	Technical, Vocational and Educational Initiative
UoW	Unit of Work
WHO	World Health Organisation
WO	Welsh Office
YST	Youth Sport Trust

Publications and Conference Presentations

Parts of this thesis have been reported in the following publications:

Harris, J. (1993). Physical education in the national curriculum: Results of a pilot study in secondary schools. British Journal of Physical Education, 24 (4), 36-40.

Harris, J. (1994). Health related exercise in the national curriculum: Results of a pilot study in secondary schools. British Journal of Physical Education Research Supplement, 14, 6-11.

Harris, J. (1994). Physical education in the national curriculum: Is there enough time to be effective? British Journal of Physical Education, 25 (4), 34-38.

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Penney, D., & Harris, J. (1997). Extra-curricular physical education: More of the same for the more able? Sport, Education and Society, 2 (1), 41-54.

Parts of this thesis have been reported in the following conference presentations:

Harris, J. (1993, July). Physical education in the national curriculum in England. Paper presented at the International University Sports Federation (FISU/CESU) Conference, Buffalo, USA.

Harris, J. (1994, June). Physical education in the national curriculum in England: Results of a national survey in secondary schools. Paper presented at the AISEP World Congress on Physical Education and Sport, Berlin, Germany.

Harris, J. (1994, August). Health related exercise in the national curriculum in England: Results of a study in secondary schools. Paper presented at the 10th Commonwealth and International Scientific Congress, University of Victoria, British Columbia, Canada.

Harris, J. (1995, September). Putting health first: An alternative policy and practice for physical education. Paper presented at the European Conference on Educational Research (ECER), University of Bath, England.

Harris, J. (1997, September). Gender issues in health-related exercise. Paper presented at the European Physical Education Review (EPER)/Centre for Research into Sport and Society (CRSS) Conference, University of Leicester, England.

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Almond, L., & Harris, J. (in press). School interventions. In Health Education Authority (Ed.) Young and active? Symposium proceedings, June 1997, Beaconsfield.

Cale, L., & Harris, J. (in press). The benefits of health-related physical education and recommendations for implementation. Bulletin of Physical Education.

Harris, J. (in press). Gender issues in health-related exercise. In I. Waddington (CRSS) & K. Green (EPER) (Eds.), Physical education, health and gender. London: Athlone Press.

Penney, D., & Harris, J. (in press). The national curriculum for physical education - Have we got it right? British Journal of Physical Education.

Parts of this thesis will be reported in the following forthcoming conference presentation:

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Chapter 1: Introduction

1.1 Introduction

This Chapter is presented in five main sections: (1) the context of the research, (2) personal and professional involvement, (3) the research problem, (4) implementation, and (5) reporting the research.

1.2 Section 1: The Context of the Research

Following the 1988 Education Reform Act (ERA)¹, a National Curriculum (NC)² was introduced subject by subject (DES, 1988), the National Curriculum for Physical Education (NCPE) being implemented in schools from the beginning of the 1992-93 academic year (DES & WO, 1992) and revised three years later (DfE & WO, 1995). The NCPE incorporated health-related exercise³ (HRE) as a statutory component of physical education (PE) (DES & WO, 1992; DfE & WO, 1995) and as a component of the non-statutory cross-curricular theme of health education (HE) (NCC, 1990). Thus, from 1992, HRE had a formal place within the NC and NCPE and was to be

¹The ERA (1988) established the principle of a National Curriculum (NC) for pupils aged 5-16 in all state schools in England and Wales. In addition, the ERA introduced other major changes such as Local Management of Schools (LMS) and open enrolment. LMS involved fundamental changes to the budgetary and financial management arrangements for schools and open enrolment removed Local Education Authority (LEA) control of school intakes (DES, 1988).

²The central organising concept of the NC was a subject-based structure comprising core and foundation subjects. The core subjects (English, mathematics, and science and, in Welsh-speaking schools in Wales, Welsh) were considered to 'encompass essential concepts, knowledge and skills without which other learning cannot take place effectively' (DES, 1989, 3.6). The foundation subjects comprised history, geography, music, art, physical education, technology (including design), a modern foreign language (for pupils aged 11-16) and, in non-Welsh speaking schools in Wales, Welsh. Also identified within the NC were cross-curricular dimensions (eg. equal opportunities), skills (eg. personal and social education) and themes (health education, economic and industrial understanding, careers education and guidance, education for citizenship, and environmental education) (NCC, 1990). Each NC subject was defined in terms of Attainment Targets (ATs), 'setting out the knowledge, skills and understanding that pupils of different abilities and maturities are expected to develop within that subject area' and statements of attainment which described the full range of attainment of the majority of pupils of different abilities during compulsory education (DES, 1989). Within the NC, Programmes of Study (PoS) were described as 'the matters, skills and processes which must be taught to pupils during each key stage in order for them to meet the objectives set out in attainment targets' (DES, 1989). The NC included 'End of Key Stage Statements' (EKSS) which summarised what a pupil should know, understand and be able to do by the end of each key stage (DES, 1989). The NC proposed a new nomenclature for the years of schooling comprising four Key Stages (KS): KS 1 (reception, years 1 and 2, age 5-7 years); KS 2 (years 3-6, age 7-11 years); KS 3 (years 7-9, age 11-14 years); KS 4 (years 10-11, age 14-16 years) (DES, 1989).

³Health-related exercise (HRE) was the term adopted within the NC for the area of work associated with health and fitness. However, numerous other terms for this area have been used such as health-related fitness (HRF), health-related physical fitness (HRPF), health-related physical activity (HRPA), health-related physical education (HRPE), health-based physical education (HBPE), health-focused physical education (HFPE) and a health focus in PE (see Chapter 2, Section 2.6.3). Many of the above terms are used throughout this thesis, the aim being to employ the specific terms used by authors and respondents when referring to matters associated with 'health and fitness' within the school curriculum.

delivered to all children throughout schooling. At the outset of this study, only limited information was available on HRE in schools in England (Booth, 1986; Booth, Almond, & Dowling, 1987; Matharu, 1987; Sharman, 1988) and little was known about how HRE was viewed, approached and delivered within PE curricula in schools.

In addition to the introduction and influence of the NC and the NCPE, there has in recent years been an upsurge of interest in the health, activity and fitness status of both adults and children. Research has led to a degree of concern about the low levels of habitual physical activity in the lives of many adults and young people (Armstrong & Bray, 1991; Armstrong et al., 1990a, 1990b; Armstrong & McManus, 1995; Cale & Almond, 1992a, 1992b, 1992c; Sleaf & Warburton, 1992, 1994; Sports Council & Health Education Authority (HEA), 1992a). The indications are that only about a third to a half of children and adults in England are sufficiently active to benefit their health. As a consequence, and in conjunction with increasing evidence of the health benefits of moderate intensity exercise (Blair & Connelly, 1994), adult exercise prescriptions have witnessed a paradigm shift from an emphasis on 'training for fitness' to that of 'physical activity for health' (ACSM & US Centers for Disease Control and Prevention (CDCP), 1993). Recent guidelines for children (Corbin, Pangrazi & Welk, 1994) and adolescents (Sallis & Patrick, 1994a, 1994b) have similarly adopted a 'lifetime physical activity model' as the basis for establishing physical activity guidelines (Corbin et al., 1994, p. 1).

The implications of the above are that much attention is being paid to the promotion of physical activity among young people and to enhanced understanding of the benefits of exercise and the risks of inactivity. Indeed, the Sports Council has published the findings of a national survey on young people and sport, including the views of teachers and children on sport and physical activity (Mason, 1995a, 1995b) and it has also expanded its National Junior Sport Programme (NJSP) to include the Youth Sport Trust (YST) developments (Sports Council, 1995; YST, 1995) and those prompted by recent government papers on sport (Department of National Heritage (DNH), 1995, 1996)⁴. In addition, the HEA (1997a, 1997b) has focused its attention

⁴The National Junior Sport Programme (NJSP) is co-ordinated by the Sports Council to develop the role of sport in the lives of young people (Sports Council, 1995). Developments within the NJSP include TOP Play, TOP Sport, Champion Coaching and Top Club. These have been developed in conjunction with organisations such as the Youth Sport Trust (YST), the National Coaching Foundation (NCF) and Governing Bodies of Sport. The Foundation Certificate in Health-Related Exercise (now known as FirstLevel) was developed by Central YMCA and supported by the Sports Council. Government papers on sport (Department of National Heritage, 1995, 1996) have prompted further developments such as the Challenge Fund, Coaching for Teachers, Sportsmark and the School Community Sport Initiative. The Challenge Fund is aimed at encouraging school-sports club links and is currently open to secondary schools, the intention being to extend it to primary schools in 1997/98.

on the physical activity needs of youth, a number of initiatives have been introduced aimed at the promotion of physical activity with young people, and there has also been increasing interest from within the exercise and fitness industry in England with respect to the development of training courses for exercise teachers and leaders working with children (see Chapter 7, Section 4, 7.5.2).

In the same year that the NCPE was introduced, the government's strategy for the health of the population of England (Department of Health (DoH), 1992) identified the school as a key setting for health promotion work and highlighted the role of school PE in teaching young people about the necessary skills and understanding associated with adopting an active lifestyle. The educational process was described as critical in educating and providing opportunities for young people to become independently active for life, and a specific recommendation was made to focus on school-age children, and to provide education, skill development and specific experience of the enjoyment and benefits of physical activity (Killoran, Fentem, & Caspersen, 1994). Indeed, PE's role in health education has previously been acknowledged in the form of two national projects funded by the HEA, previously the Health Education Council (HEC), one focusing on primary schools (Happy Heart Project 1987-1992) and the other on secondary schools (Health and Physical Education Project 1985-1993), both of which have supported the development of health-related initiatives in PE in England. More recently, attention has turned to the holistic model of the 'health-promoting' school evidenced by the setting up of the European Network of Health Promoting Schools⁵. The 'health promoting' school is defined as one which aims at achieving healthy lifestyles for the total school population by developing supportive environments conducive to the promotion of health (Parsons, Stears, & Thomas, 1996). 'Health promoting school' awards are received in acknowledgement of achievement or progress towards identified health promoting targets such as offering a wide range of physical activities accessible to all.

Coaching for Teachers aims at providing free tuition for primary and secondary teachers to improve their skills and coaching qualifications. Sportsmark and Sportsmark Gold are awards based on recognition of 'good' school PE and sport (as identified by set criteria) which are currently open to secondary schools and may extend to primary schools. The School Community Sport Initiative is available to all schools and provides funding from National Lottery money for capital projects which contribute to sports development at a local level. Additional developments have been proposed for 1997/98.

⁵The European Network of Health Promoting Schools, established in 1991, is funded by the World Health Organisation (WHO), the Commission of European Communities and the Council of Europe. It is overseen by an International Planning Committee and currently involves thirty-seven countries and over 5,000 schools. The project aims to establish a network of healthy schools to provide a framework for innovations in health promotion and to disseminate good practice (Parsons, Stears, and Thomas, 1996).

Statements made by the DoH (1992, 1996) and the Sports Council and HEA (1992) suggest that much faith has and is being placed in school PE to educate children about exercise and to activate young people. However, PE programmes in America have been accused of failing to foster current and future healthy exercise and other lifestyle habits in youth (Douthitt & Harvey, 1995). At the outset of this project, the paucity of information on the status, organisation, content and delivery of health-related aspects of PE in England constrained any attempt to comment on the impact of such developments. The relationship between PE and health, and the status and expression of HRE in the NCPE certainly appeared to be a worthy area for investigation, and has remained so during the course of this research (1991-97).

1.3 Section 2: Personal and Professional Involvement

Involvement in this research project developed from a long-standing personal and professional interest in the relationship between PE and health and the pedagogical implications for PE curricula in schools. Having taught in three different secondary schools for twelve years and delivered numerous in-service training (INSET) courses for PE teachers and advisers on behalf of the HEC/HEA Health and Physical Education Project (HPEP) (see Chapter 2, Section 2.3.1), I had considered, debated, and explored a variety of approaches and methods with respect to health-related issues within PE. Furthermore, during a one year full-time secondment funded by Staffordshire Local Education Authority (LEA) (1986-87), I successfully completed an MA in Physical Education at the University of Birmingham, part of which was a thesis on 'the development of health-based PE in and around Staffordshire' (Harris, 1987). Following this, I was granted a further two-term one-day-a-week secondment (January to July 1988) to work with the HPEP at Loughborough University. This resulted in a major contribution to an LEA publication entitled 'Fitness for Life' (Staffordshire LEA, March 1989). Thus, prior to embarking on doctoral study, I had been involved in teaching, lecturing, INSET and research in the area of HRE, and had contributed to publications and presented at national and international conferences on the subject of HRE.

My previous experience and background in the area of study is relevant in that it not only explains my choice of subject for doctoral study but also the approach to the research and the specific focus on the secondary school context. It was acknowledged from the outset that, due to my background in the area, reflexivity would be a critical issue within the research process. Indeed, a personal hope was that publications on the research findings would focus attention on HRE within the NCPE and provide a sound platform and informed base from which the PE profession might debate the contribution of PE to the activity and health status of young people.

1.4 Section 3: The Research Problem

The research problem focused specifically on how HRE was being implemented within the NCPE in secondary schools in England. This information was not available at the outset of the study.

The aim of the research was to explore and describe the way in which HRE was being viewed, approached and delivered in secondary schools in England.

The objectives were:

- (a) to explore and document the views, approaches and practices relating to HRE within the NCPE in secondary schools in England, and
- (b) to identify factors which may influence the approach to and provision of HRE in secondary schools in England.

Some key questions addressed by the research and which had operational implications were: How are PE teachers approaching HRE? Are there reasons underpinning the approaches adopted? How are PE teachers interpreting the HRE requirements of the NCPE? How are PE teachers linking the HRE requirements of the NCPE and those in HE? What do HRE courses look like? What resources and INSET are supporting the teaching of HRE? What is influencing the philosophy, content and delivery of HRE work in schools? Are PE teachers in state schools approaching HRE differently from those in independent schools? Is HRE experienced in the same way in mixed and single sex schools, in schools of different sizes, and in different parts of the country? Do female and male PE teachers view, approach and deliver HRE differently? Are girls and boys receiving similar HRE programmes? Do the HRE views and practices of 'more experienced' PE teachers differ from those of 'less experienced' PE teachers?

In order to achieve these objectives the research design involved the integration of qualitative and quantitative methods in the form of a national survey of heads of physical education departments (PE HoDs) in secondary schools in England, followed by case studies in a small number of state secondary schools in different areas of the country. The survey specifically aimed to provide data that would describe the provision of HRE in schools in terms of both quantity and quality, explore the variation in this provision between schools, and address possible factors influencing such variations (such as the type, gender, size and geographical location of the school, and the gender and teaching experience of the PE HoD). The case studies aimed to

provide an insight into teachers' perspectives on HRE in terms of their views, approaches and practices.

1.5 Section 4: Implementation

As the title of the thesis focuses on 'implementation' of aspects of the NC, it is considered necessary to clarify the use of this particular term. A dictionary definition of 'implementation' is 'putting into effect' (Allen, 1990). This research focuses on the way in which PE teachers in secondary schools in England were 'putting into effect' the HRE component of the NC and NCPE. Hill (1980) is of the opinion that 'it is hard to identify a dividing line at which policy making can be said to be completed and implementation to start', and he considers that '...many policies are so skeletal that their real impact depends upon the way they are interpreted at the implementation stage' (p. 44). The focus in this study is the 'implementation' stage in terms of teachers' interpretations of HRE within the NCPE and the expression of this in practice. However, it is acknowledged that many 'sites' and individuals (including LEA officers, headteachers, PE HoDs and individual PE teachers) were involved to various degrees in 'implementation', and that the NCPE interacted with a variety of different contexts in which at the same time, other policies were being 'implemented', notably LMS¹, open enrolment¹ and the introduction of the NC in other subject areas (Penney & Evans, 1994).

1.6 Section 5: Reporting the Research

This thesis comprises eight chapters: introduction, review of literature, survey method, survey results, case study method, case study results, discussion and conclusion. The discussion considers ethical issues addressed within the research process and limitations of the study. The conclusion includes implications of the research findings and proposes recommendations for the future.

Prior to writing this thesis, it was necessary to explore aspects of the debate about the way in which research should be reported. Traditionally, the reporting of research has been conducted in the third person with the claim that this maintains objectivity, reduces bias and provides a sounder basis for judging any claims made (Hitchcock & Hughes, 1995). In contrast, many qualitative researchers make more use of the first person in reporting research to minimise distortion of the reality they claim to represent (ibid, 1995). This variance in approach could be said to represent the fundamental difference between scientific, positivistic traditions and qualitative, naturalistic traditions. Wolcott's view (1990) is that the formality of the writing should match the formality of the approach. This is the stance that has been adopted within this thesis. The use of the first and third person narrative style varies in the

thesis depending on its appropriateness with respect to the employment of qualitative or quantitative methods and to the role of myself as the researcher.

Chapter 2: Review of Literature

2.1 Introduction

This review is presented in five main sections: (1) historical perspective of the PE-health relationship: this section reviews the relationship between PE and health from the early 1900s through to the mid-1980s, (2) the development of health-related physical education (HRPE): this section documents the establishment of national health and PE projects and their impact on the development of HRPE in schools from the mid-1980s through to the introduction of the NC, (3) HRE in the NC and NCPE: this third section explores the position of HRE in PE prior to the ERA and during the developmental phases of the NCPE and its revision; it also includes a report on health-related research and resources, (4) the effectiveness of HRPE programmes in schools: this section reviews the effects on children of formally-evaluated HRPE programmes in schools, and (5) analysis and critique of HRPE: this final section documents the ideologies, trends and issues underpinning, influencing and associated with health issues in PE.

2.2 Section 1: Historical Perspective of the PE-Health Relationship

In considering health issues within PE it is relevant to gain an understanding of past developments through an historical perspective of the relationship between PE and health from the time that PE first became an established subject in schools in England through to the mid-1980s.

2.2.1 A Medico-Health Rationale

From the early 1900s through to the middle 1950s, a concern for health focused on physical activity compensating for and possibly remedying 'inherited and acquired physical defects' associated with poor working class living conditions and concerns about the implications of such conditions for an efficient workforce and fit military force (Kirk, 1992, p. 125). The first national syllabus for PE stated that 'the primary objective of any course of physical exercises in schools is to maintain and, if possible, improve, the health and physique of the children' (Board of Education, 1909, p. 9). This concern for the nation's health prompted the expansion of the teaching of PE and the provision of improved recreational facilities during the 1920s and 1930s. The 1933 syllabus of physical training for schools stated that 'it is beyond question that without healthy conditions of the body, the development of mental and moral faculties is seriously retarded, and in some cases, precluded' (Board of Education, 1933, p. 6). This syllabus guided the emancipation of PE from the old 'drill' image and placed much emphasis on the importance of good posture and on the cultivation of agility and suppleness through active movement. In its early days then, the association of health

and PE reflected a 'medico-health rationale' with exercise being defined in medical terms as one factor, along with improved nutrition, in securing the 'health' of the working class masses (Kirk, 1992; Williams, 1988).

With respect to broader influences, Graves & Hodge's (1961) social history of Great Britain in the 1920s and 1930s provides an insight into the sport, exercise and recreation habits of individuals during this period. Graves and Hodge (1961) report that almost all sports gained in popularity during the 1920s, especially swimming, football and tennis. There was also a boom in dancing during the 1920s, and the 1930s witnessed the popularity of miming dances and the emergence of fast dances such as the 'jitterbug'. Parallel to these developments was a concern for recreation and getting out into the countryside for fresh air, seemingly the origins of 'active recreation'. During the 1930s, working class families enjoyed seaside holidays and the newly established holiday camps whereas middle class people were venturing abroad for their holidays. As a consequence of a vogue in slimming in the late 1920s, 'many people adopted the habit of doing early morning physical jerks' (ibid, 1961, p. 227) and, indeed, the slimming cult continued until the early 1930s when it developed into 'keeping fit' (ibid, 1961, p. 376). The Times in November 1936 urged a 'great national effort to improve the physique of the nation' which involved the provision of playing fields for males and the expectation of females to join physical exercise classes organised by the League of Health and Beauty (ibid, 1961, p. 377). However, the setting up of the National Fitness Council in 1937 was prompted by the lack of fitness and poor health of the nation, and the desire for fit citizens to defend the country, rather than fit individuals to enjoy more positive health (McNair, 1985).

2.2.2 Military and Therapeutic Influences

Returning to a consideration of school-based physical activity, the post-war period saw the emergence of two contrasting approaches within PE. During the 1950s, a notion of health in PE developed within some private girls' schools, expressed through a form of Swedish gymnastics which was strongly associated with the 'harmonious development' of the whole body (McIntosh, 1968, p. 120). This activity was seen as relevant to health in terms of developing elegance, poise and posture, and as physical preparation for child-bearing. This period also witnessed a new conceptualisation of the relationship between PE and health, centring on 'physical fitness' and, specifically, the role of exercise in developing strength and endurance as a basis for 'fitness'. This view of the exercise-health relationship was embedded in, and an expression of, the 'new' scientific and functionalist approach to PE with 'fitness' being regarded as a specific capacity to achieve outcomes, such as measurable improvements in muscular strength and muscular endurance, contrasting with the 'medico-health' view of building

a framework on which specific capacities might be developed. The 'physical fitness' approach embraced a mechanistic view of the body, focusing on the physiology of exercise and kinesiology, and expressed itself in practice through circuit training and later weight training. This view of health in PE was pioneered mainly by male physical educationalists, of which there had been a post-war influx into state schools, and, as a consequence, the provision of circuit and weight training was for boys only. This 'physical fitness' approach also linked sports performance and health, introducing the notion of 'fitness for sport', and was tied closely with concerns over the national standing in international sport, focusing primarily on males (Kirk, 1992). McNair (1985) discussed the contrast between the protagonists of Ling's Swedish system of gymnastics, middle-class formally-trained young ladies, and the tough experienced retired army officers from working class backgrounds who supported the more vigorous McLaren-based system of physical training. McNair's (1985) view was that the controversy between the two groups had an unfortunate effect on the development of PE because 'it inhibited the appreciation that each group had something to contribute to fitness and health' (p. 114).

2.2.3 The Place of Health in Post-War PE in England

Parallel to these developments, there was the emergence of health education (HE), with the view of health being extended beyond physical dimensions to encompass intellectual and emotional aspects, and social and living conditions. HE was seen as synonymous with the whole curriculum, with PE having a part to play in HE but not seen as the sole arena for addressing health issues. The post-war years witnessed much educational innovation resulting in a move towards greater freedom for the individual and less formality. During the 1960s, further significant educational changes took place leading to continued expansion in the scope and content of the PE programme. Increased provision of improved facilities was evidenced, in addition to a strong academic influence from America. The 1970s, coined the 'age of leisure and recreation', witnessed a concern to meet the needs of adolescents, resulting in an expansion of physical activities accompanied by emphasis on freedom of pupil choice and a move towards wider community links. During these developments, there was a marked shift from pre-occupations with bodily health, fitness and hygiene. However, the contribution of PE to health remained largely implicit rather than explicit, with health benefits being regarded as a 'by-product' of the curriculum, rather than being a planned for or intended outcome (Kirk, 1992). McKenzie's (1989) in-depth analysis of the health movement within PE in England refers to two distinct health movements in schools this century, the first 'movement' commencing with the dual system of drill and Swedish gymnastics in the mid-nineteenth century, to the era of therapeutic PE in the 1920s and 1930s, through to the demise of the first health movement in the 1940s.

This was followed by the second 'movement' which took place from the mid-1970s onwards resulting in a period of critical reflection and debate concerning the nature and function of the health movement within PE (ibid, 1989). It is to the second health movement that attention is now turned.

2.2.4 The Re-Emergence of Health in PE

According to McKenzie (1989), the 1970s prepared the way for the re-introduction and development of a strong emphasis on health in the PE curriculum under the banner of health-related fitness (HRF). During this time, a number of physical educators advocated a re-association of health with PE (Bailey, 1978; Dalzell-Ward, 1970; Green, 1978; Groves, 1977; Head, 1974; Hudson, 1975; Roy, 1971; Stevens, 1975; Thomas, 1977a, 1977b; Wallace, 1978). In particular, John Wright, a keen advocate of the promotion of health through PE, and a prominent member of the PEA, frequently questioned whether the PE profession was accepting its wider responsibility regarding the nation's health (Wright, 1975, 1977a, 1977b). At the same time, the Sports Council expressed much interest in the exercise-health relationship and published a bibliography in the area (Sports Council, 1979) which was the basis for a publication summarising the 'case for exercise' (Fentem & Bassey, 1978).

The 1980s saw a significant development in the PE-health link, with HRF being presented as an important component of PE and part of the 'solution' to the increase in hypokinetic diseases, which are those associated with lack of physical activity, examples being back pain, obesity, and coronary heart disease (CHD). HRF was hailed as the 'major new emphasis' in curriculum development in PE (Almond, 1980a, 1980b) and had as its focus personal improvement, understanding, and the promotion of an active lifestyle (Almond, 1982). Indeed, the 1980s could be appropriately termed the 'age of health and fitness', a time which witnessed two areas of curriculum innovation which were not exam-related, aerobics and HRF (Hoyle, 1986). Hoyle viewed aerobics (or 'popmobility' as it was also known) as a curriculum response to a demand stimulated by external pressures, 'the old, middle class 'health and beauty' interest updated and socially broadened through pop, fashion, the media, entrepreneurship and the changing attitudes of young 'captive' wives and mothers' (ibid, 1986, p. 42). Hoyle (1986) considered HRF to also have a number of origins (some of them trans-Atlantic) and to be part of a wider social movement exemplified by the 'fitness boom', with its high level of media attention and commercial interest, prompted in particular by the alarming increase in CHD. Indeed, in the light of evidence suggesting that the school PE programme was not fostering positive attitudes towards physical activity (Dickenson, 1986a, 1986b, 1987; Emmett, 1971), there was

pressure on physical educators to present a relevant education which would positively influence pupils' physical activity behaviour beyond the school age.

McNair (1985) also points to influences from America in highlighting the lack of fitness of many youth and in shaping the development of the measurement of fitness, in addition to influences from Europe through research and the provision of fitness circuits and national schemes of fitness training. The influences of American innovators such as Kenneth Cooper and Charles (known as 'Chuck') Corbin were evident in the development of both the aerobic and HRF movements (Cooper, 1970; Corbin & Laurie, 1978; Corbin, Dowell, Lindsey & Tolson, 1981; Corbin & Lindsey, 1983, 1984, 1985; Corbin, Lindsey & Carre, 1982). In particular, Chuck Corbin of Arizona State University advanced an overt approach to health and fitness within PE which he presented in Britain in the 1980s. His views and ideas attracted much support, leading to a host of joint publications with British physical educators (Corbin & Fox, 1985; Corbin, Fox & Whitehead, 1985; Fox & Corbin, 1985, 1986; Fox, Whitehead, & Corbin, 1986; Whitehead & Corbin, 1985). Indeed, the development of health-related physical education (HRPE) in schools in Britain during the 1980s was undoubtedly influenced by such publications in addition to those by other key physical educators such as Len Almond, Stuart Biddle, and Neil Armstrong. Almond's (1983a, 1983b) focus was on curriculum development whereas Biddle (1981) and Fox (1983a, 1983b), primarily exercise psychologists, proposed a broad perspective of PE emphasising the affective and cognitive aspects of health-related work and Armstrong, an exercise physiologist, homed in on the promotion of physical activity to reduce the early onset of CHD risk factors (Armstrong, 1984; Armstrong & Davies, 1980, 1984; Armstrong & Pritchard, 1983).

Indeed, according to McKenzie (1989), the early 1980s provided the impetus for the second health movement in PE this century, the sources of which were curriculum development, physiology, psychology, and school practice. A DES regional course in 1982 on the 'role of PE in the whole curriculum' set the scene for 'rethinking' the PE curriculum in terms of the changing needs of pupils (Coventry LEA, 1982a). McKenzie pinpoints 1983 as the 'pivotal year' during which a number of 'benchmark' papers were published on HRF (Almond, 1983a; Armstrong & Pritchard, 1983; Fox, 1983a; Whitehead & Fox, 1983). In addition, the Sports Council organised a symposium on 'exercise, health and medicine' (Sports Council, HEC, & Medical Research Society, 1984) and a joint venture in 1984 between the Scottish School of Physical Education and the Scottish Health Education Group led to the establishment of the Health Related Physical Fitness (HRPF) Project based at Jordanhill College of Education in Glasgow (Farrally & Green, 1986; Green & Farrally, 1986). The

following year witnessed a series of published articles which presented teachers with ideas for developing HRF courses in schools (Corbin & Fox, 1985; Corbin et al., 1985; Fox & Corbin, 1985; Whitehead & Corbin, 1985). The year 1985 also saw a conference on HRF organised by the British Universities Physical Education Association (BUPEA) (1985) and the launch of the first national project on PE and health in England (HEC/PEA Health and Physical Education Project (HPEP), 1985; Pain, 1985).

In the following year, collections of professional papers were published on 'health and fitness in the curriculum' (Armstrong, 1987) and the 'foundations of HRF' (Biddle, 1987). In the same year, a national project on primary PE and health was established, a DES regional course on 'health and activity for life' took place in Sheffield (DES, 1987), and a National Association of Teachers in Further and Higher Education (NATFHE) conference was held on 'physical activity and health' in Reading (Glaister, 1987). One year later, the British Association of Advisers and Lecturers in Physical Education (BAALPE) (1988) published a booklet on health-focused PE (HFPE) in which they stated their strong support for 'a positive initiative that is of benefit to all pupils' (p. 7). The realisation that the HRPE movement was a world-wide phenomenon was evident from the abundance of publications from America, Canada and Australia informing of innovations such as the Canadian Home Fitness Programme, the Australian 'Life - Be In It' Campaign, and the Daily Physical Education Programme (Bean, 1987; Colquhoun & Chad, 1987; Hawkins, 1984; McIntosh & Sabin, 1987; Pyke, 1986; Williams, 1984).

In comparing the two health movements in England this century, Williams (1988) described the major differences as: (a) the long term aspirations of current programmes (requiring an understanding of the relationship between exercise and health) in comparison with the short term nature of the aspirations of earlier programmes, and (b) the current dominance of games in the curriculum in comparison with earlier programmes which consisted of a range of physical exercises with minimal or no games content. Williams (1988) concluded: 'Health and fitness may be an old established title. Its place in the contemporary curriculum, however, is underpinned by a different rationale which demands a different content and teaching style if it is to succeed' (p. 3).

2.3 Section 2: The Development of Health-Related Physical Education

Having reviewed early developments of the PE-health relationship, this section documents the establishment of national health and PE projects and their impact on the

development of HRPE in schools from the mid-1980s through to the introduction of the NC.

2.3.1 National Health and PE Projects

The first of two national health and PE projects in England was established in the mid-1980s. The Health and Physical Education Project (HPEP) (1985-1993) was directed by Len Almond and was based at Loughborough University. The HPEP was funded by the HEA (formerly the HEC) in conjunction with the PEA. Its purpose was to promote HBPE in schools throughout England, Wales and Northern Ireland (HPEP, 1985, p. 203). Its initial focus was secondary schools (although it partly funded a primary project which later attracted funds from the HEC) and, from 1991, the HPEP was involved in curriculum development in both the secondary and primary sectors. Between 1985 and 1993, the HPEP was responsible for the delivery of fifty-six INSET courses predominantly for secondary school teachers but also for advisers, health promotion officers, and primary school teachers (HPEP, 1993). Most of the courses took place from 1991-93 at Loughborough University. However, in 1992 there was a shift in focus to regional courses with an emphasis on networking. In total, 1453 individuals (of which just over sixty per cent were female) attended the INSET courses, including over fifty individuals (almost equal percentages of females and males) who attended a certificated programme of four one-day courses over a year (ibid, 1993). In addition to one-day INSET courses, the HPEP delivered one-week courses as part of the Loughborough University Summer School programme. The impact of the HPEP was evaluated through surveys (Booth, 1986; Sharman, 1988), course participant questionnaires, and formal discussions. The HPEP produced thirty-two newsletters between 1986 and 1993 which were initially distributed to PEA members and subscribers. From 1988 they were sent to all secondary schools and, from 1992, were also sent to all primary schools in England (HPEP, 1993). Up until August 1992, the newsletters were distributed via PE advisers. In addition, the HPEP also produced two case study publications, one on HFPE programmes (1986) and the other on promotional events (Richardson, 1988), a booklet on 'the stress factor' (1987a) and a book on 'swimming to health' (Hardy, 1990). Individuals who contributed to the work of the HPEP went on to produce additional health-related teaching resources (Elbourn & Harris, 1989; Harris & Elbourn, 1990, 1991, 1992, 1997).

Two years after the establishment of the secondary-focused project, a primary 'health and PE' initiative, the Happy Heart Project (HHP) (1987-1992) was set up, funded by the 'Look After Your Heart!' programme of the HEA (formerly the HEC) and the National Children's Play and Recreation Unit. The HHP was co-directed by Mick Mawer and Mike Sleap and was based at the University of Hull. Its main objectives

were to establish a knowledge base for primary-school children on the relationship between exercise and health and to positively influence children's activity levels in and away from school (Mawer & Sleaf, 1987). The HHP developed a classroom resource and a complementary unit of work on physical activity and health to be integrated into the PE programme. Initiatives within the extra-curricular setting were promoted through a playground games pack (HEA, 1992) and a booklet with suggestions for the organisation of a 'Happy Heart' day (Hickman, 1990). The HHP delivered INSET courses for primary school teachers in over sixty LEAs and contributed to newsletters which were initially distributed to all PEA members (HPEP, 1991a, p. 9). In addition to the newsletters, the HHP also produced resources for primary school teachers (HEA, 1990a, 1990b).

2.3.2 The Rise and Rise of HRPE in Great Britain

The development of HRPE in secondary schools in Great Britain took place at a rapid rate during the 1980s, especially following the establishment of the two national health and PE projects (Tables 2.1 and 2.2). Indeed, Colquhoun (1991) commented on the comparison in PE teachers' objectives between 1974 and 1986 (PEA, 1987) and the escalation of the objective of 'physical development' from seventh to second place, clearly indicating increased interest in health and fitness issues in PE. Surveys undertaken by the HPEP revealed that in 1985 approximately 330 secondary schools in Great Britain were developing HRPE courses (Booth, 1986), but by 1987 this figure had increased dramatically to approximately 2000 (Sharman, 1988) (Table 2.1). This probably reflected 'the growth of interest shown by local authority advisers as more and more courses are introduced into the INSET programme, ...and the number of articles on health and fitness appearing in professional journals' (Almond with Dowling, 1987, p. 142). However, the amount of time spent on these courses represented only about two per cent of the whole PE curriculum which was much lower than the target suggested by the HPEP of nine per cent of PE time in all schools, representing one six week module in each year (HPEP, 1987b, p. 1).

Author	Research Method	Findings
Booth (1986)	Postal questionnaire to 112 LEAs throughout Great Britain and Northern Ireland; 56% response rate.	The number of LEA courses promoting health and fitness had increased during the study period (1982-85). The greatest school involvement was in the South-East, Home Counties, Greater London, West Midlands, North-West, Yorkshire and Humberside. There was much regional variation. A minimum of 338 schools were involved.
Moore (1987)	Survey 1981; 100 male PE HoDs in Scottish secondary schools; 46% response rate.	87% of male PE HoDs did not include any specific fitness work for 11-14 year olds but 100% did so for senior pupils.
Harris (1987)	Survey and interview methods with a purposive sample of 30 educators in/around Staffordshire; 100% response rate.	Information was obtained about 17 HBPE courses and the views of 30 key educators were documented. The common experience was a change of emphasis and approach, more than content, delivered through short courses with older pupils.
Matharu (1987)	Case study of 10 secondary schools in Coventry.	All 10 secondary schools included HBPE programmes in one form or another.
Sharman (1988)	Postal survey in 1987 to all LEA PE advisers in England; 73% response rate.	1,581 schools in England were involved in developing health focus courses in PE (extrapolation to estimated 2,000 to include remaining authorities). There was much regional variation (0 to 100% schools). There was little involvement in London, South-East, West and South Yorkshire, and Greater Manchester, and above-average involvement in West Midlands, Merseyside and South-West.

Table 2.1 Research Studies on the Development of HRPE in Schools in Great Britain

The HPEP's survey findings were supported not only by smaller surveys in Coventry and Staffordshire (Table 2.1) but also by larger surveys conducted by the Secondary Heads Association (SHA) (Table 2.2). The latter indicated that in 1990 well over half of secondary state schools (and over a quarter of independent schools) incorporated HRF programmes within the PE curriculum for the eleven to fifteen age range (SHA, 1990). Within the survey, curriculum activities were ranked to indicate the overall frequency for each of forty-two activities for the eleven to eighteen age group in relation to other activities. Within the ranking for boys' schools, 'health fitness' (the original term employed within the survey) was not listed in the top twelve activities for state or

independent schools (ibid, 1990). However, for girls' schools, 'health fitness' was ranked eighth in state schools and fifteenth in independent schools, and for mixed schools 'health fitness' was ranked twelfth in state schools and twenty-first in independent schools (ibid, 1990). A survey by SHA four years later showed substantial increases in the percentage of HRF in the PE curriculum for all age ranges (Table 2.2). The fourteen to fifteen year age range received the highest percentage of HRF courses (SHA, 1990, 1994), seventy-four per cent in state schools and fifty-nine per cent in independent schools (SHA, 1994). Within a ranking of curriculum activities to indicate the overall frequency for the fourteen plus age group in relation to other activities, 'health fitness' was listed tenth for both state schools (68%) and for independent schools (59%) (ibid, 1994). These findings support the claim that health-related curricular initiatives greatly increased both within the state and independent sector during the 1980s and early 1990s.

HRF in Schools (Curricular+Extra-Curricular)				
	State Schools		Independent Schools	
	1990	1994	1990	1994
Age	%	%	%	%
11+	55	62	27	40
12+	55	62	28	41
13+	52	66	36	51
14+	72	74	48	59
15+	68	70	47	59
16+	30	46	44	47
17+	25	39	41	54

Table 2.2 Comparison of the Percentage of HRF Programmes in Curricular and Extra-Curricular PE in State and Independent Secondary Schools in 1990 and 1994 (SHA, 1994)

2.3.3 HRPE INSET, Resources and Programmes

Coupled with the development of HRPE in schools came a rise in associated INSET, resources and programmes. The survey of LEAs conducted in 1986 by the HPEP documented a noticeable growth in the number of INSET courses planned and delivered between the years 1982-85 (Booth, Almond, & Dowling, 1987). Between these years, seventy-nine courses took place across seventy LEAs and eight more had to be cancelled due to teachers' strike action (Booth et al., 1987). In addition, a number of LEAs were prompted to set up working parties to explore the development

of a health focus within the PE curriculum, resulting in numerous publications on HBPE including those by Coventry (1982b, 1984, 1985), Derbyshire (1987), Dudley (Woodhouse, 1988a, 1988b, 1988c, 1988d), Lancashire (1984), Liverpool (1987), Shropshire (1984), Somerset (1985) and Staffordshire (1989). In addition, the North Western Counties PEA (NWCPEA) produced a video and workpack on HRF in the school curriculum (1986) and a series of workbooks, one of which was on 'fitness programmes for GCSE' (Purcer, 1988). In Scotland, a curricular package on HRPF was produced by a working group based at Jordanhill College (CAST, 1986) and the same institution published a further resource on the development of teaching methods in HRPF (Farrally & Green, 1986).

In addition to LEA resources, descriptions of individual HRPE curricular programmes became available through a case study booklet (HPEP, 1986) and in publications in HPEP newsletters (Caldecott, 1992; Chittenden, 1986, 1987; Edwards, 1987; Harris, 1988a, 1988b). A particularly comprehensive document on 'an action based fitness course related to health' was produced by Deyes High School (Maghull, Merseyside) following the attendance of the Head of Girls' PE at a HRF course at Loughborough University (Johnson, 1986). A further six descriptions of HRF programmes were reported in the 1987 DES course proceedings. Additional sources of information on curricular programmes included PE professional journals (Bailey, 1985; Honeywill, 1986a, 1986b; Hutchinson et al., 1990; Smith, 1994; Smith & Cestaro, 1995), research journals (Whatley & Jacobsen, 1993) and conference proceedings (Devis & Peiro, 1992). Almond (with Dowling, 1987) commented on the emphasis of many 'health and fitness' courses on fitness testing, on their lack of reference to other subject areas, and on the influence of American resources (examples being 'fitness' packages such as 'Physical Best' and resources produced by the American Heart Association). A review of the effects of formally evaluated HRPE programmes is presented further on in this Chapter (Section 4, 2.5).

In addition to relatively small-scale PE programmes, larger projects involving a range of health-promoting interventions and incorporating school-based initiatives were also evident such as the Welsh Heart programme (Nutbeam & Catford, 1987), and the Minnesota Heart Health (Blake et al., 1987), Stanford Five-City (Farquhar et al., 1990), and Pawtucket Heart Health (Gans et al., 1994) projects in America (see King, 1994). More recent texts (Pate & Hohn, 1994) have included descriptions of HRPE curricular programmes in American schools (Johnson & Harageones, 1994). Many extra-curricular initiatives have also been reported within HPEP newsletters (1985-1993), the HPEP case study booklet on promotion events (Richardson, 1988), and in 'health and fitness' texts (Harris & Elbourn, 1997; Pate & Hohn, 1994).

2.4 Section 3: HRE in the NC and NCPE

Having traced the development of HRPE through the 1980s, of particular relevance to this research is the position of HRE in PE prior to the ERA (DES, 1988) and during the developmental phases of the NCPE (DES & WO, 1992) and its revision (DfE & WO, 1995). This section also includes a report on health-related research and resources.

2.4.1 The Position of HRE pre-ERA

The position of HRE as a major development in Britain, Australia, USA and Canada (Colquhoun, 1989) and as a relatively recent innovation in PE is relevant in considering how well placed 'health' was to be incorporated into or even to define the NCPE in England and Wales. Health was viewed as one of many competing discourses within PE at this time (Evans & Penney, 1995a, 1995b). Prior to the ERA, claims were made that PE was failing to equip pupils with the attitudes and skills necessary to improve the country's international sporting and economic standing (Evans, 1990). The development of the NCPE re-opened debates about the place and nature of PE in the school curriculum, and in particular, the status and place of competitive sport in PE. Indeed, there were some fears that sport might lose its dominant role in the PE curriculum if the recent emphasis given to HRF (Evans, 1990; Kirk, 1986) was expressed in the NCPE (Sports Council for Wales, 1989). However, whatever the outcome of curriculum debate on PE, it was made clear by the government that the NCPE was to be a development that would have to be accommodated within existing levels of resourcing of PE in schools (DES & WO, 1991a) and thus investment in INSET was likely to be limited (Evans & Penney, 1995a, 1995b; Penney, 1994).

2.4.2 HRE in the Early Development of the NCPE

The ERA (1988) established a NC, the particular form and content of which attracted some criticism from those who viewed it as negatively impacting the notion of a unified curriculum (Ball, 1990) and who were concerned about the low status of cross-curricular elements (Davies, Holland, & Minhas, 1990). Differences in subject status were evident in the distinction between core and foundation subjects, the former (English, mathematics and science) being introduced first in 1989, with modern languages, music, art and PE being the last of the foundation subjects to be implemented in 1992 (DES, 1989). Fears were expressed that priority would be given to subjects introduced ahead of PE and there was some concern over the curriculum time that would remain for PE in schools (Murdoch, 1989; Sports Council for Wales, 1989). A working group was set up by the British Council for Physical Education (BCPE) to make preliminary recommendations on the content of PE, recommendations which were considered to have 'greatly assisted' the work of the formal working group

(NCPE WG) which was established to advise on PE in the NC (DES & WO, 1991a, p. 1).

The NCPE WG charged with producing drafts of the curriculum content of the NCPE comprised professional sportsmen, educationalists, and representatives from the business world (DES, 1990). Although several key physical educators (such as Professors Elizabeth Murdoch and Margaret Talbot) were members of the NCPE WG, Penney's view (1994) was that the membership of the group was a symbolic representation of the government's view of PE which equated with sport, and was crucial in determining the interests and ideologies that were included, omitted and privileged in the NCPE. The NCPE WG contained no practising teachers and no person representing the area of HE. A member of the 'health' interest group commented on the membership of the NCPE WG: 'Their selection seems a bit like asking a Formula 1 racing driver's advice on how to design a new public transport system' (Fox, 1992, p. 8). The NCPE WG worked within a number of constraints such as limited consultation time for the process, awareness of timetable pressures and resource implications in schools, and no indication of the curriculum time allocation for PE.

The Interim Report (IR), published in February 1991, detailed a comprehensive rationale for PE and identified three ATs as the fundamental components of progressive development in PE: planning and composing, participating and performing, and appreciating and evaluating (DES & WO, 1991a). Six categories of activity formed the basis of a balanced PE curriculum: games activities, dance forms, gymnastic activities, athletic activities, swimming and water-based activities, and outdoor education and adventure activities (ibid, 1991a). Within the framework of areas of activity, four elements were identified that should 'permeate' the PE curriculum: health and safety education, personal and social education, sensory experience and aesthetic expression and appreciation, and equal opportunities. Thus, the IR mirrored the strongly classified (Bernstein, 1990) curriculum of the NC as a whole, and presented and defined PE primarily as a set of distinct areas of activity. HE was recognised as an 'important issue particular to PE', and 'health and safety education' identified as a 'permeating theme' in the PE curriculum (DES & WO, 1991a). The latter comprised references to general fitness (strength, stamina and endurance), stress management, mental and emotional health, the development of positive attitudes towards a healthy and active lifestyle, and safety issues associated with conduct, equipment, clothing, facilities and the environment (ibid, 1991a, p. 63). Aspects of HRE were addressed in statements of attainment and end of key stage statements (EKSS) (Table 2.3). However, HRE was not identified as a distinct area with its own PoS. Instead, the PoS related to each of

the areas of activity. In Penney's view (1994), this structure and framework established an implicit hierarchy with the permeating themes effectively subordinated in relation to the areas of activity. Permeation of the themes through the areas of activity was not explained and the link between the two remained essentially implicit.

KS1

Pupils should be able to recognise changes in the body during and after activity.

KS2

Pupils should be able to sustain activity over periods of time. Pupils should take part in simple and safe exercise programmes.

KS3

Pupils should be able to evaluate opportunities in the community for participation and performance.

KS4

Pupils should know about the contribution of different activities to a healthy lifestyle. Pupils should be able to plan a personal commitment to a chosen activity and an active lifestyle including, where appropriate, links with the community.

Table 2.3 EKSS Relating to HRE in the IR for PE (DES & WO, 1991a)

Although responses to the IR were invited, critical comment on the structure presented for the NCPE was inevitably restricted by the defined format, content and time limit for the responses. Many organisations and individuals associated with sport, dance, outdoor education, health, and special educational needs (SEN) submitted advice to the WG. However, the responses to the IR were not made available for public consumption. Within a research programme documenting the implementation and impact of the NCPE, Penney (1994), reflecting on this period, noted that, with the exception of health, the permeating themes received little attention. She reported teachers' concerns (expressed in discussions during 'National Curriculum Response Days') that HRE, which was a distinct area within their existing curricula, might be 'lost' if it was not identified as such in the text of the NCPE. The HPEP (1991b) sent a detailed response to the IR, articulating teachers' views and interpretation of the text, and identifying the permeation model as an approach which '...marginalises Health Related Exercise and causes it to take second place to other issues' (p. 2). HRE concepts were considered by the HPEP group to be 'too important...to be left 'floating' amongst a limited and very conventional range of activity areas' (ibid, 1991b, p. 2). With reference to planning and delivery, the HPEP (1991b) stated 'whilst it is recommended that HRE be delivered through deliberate and planned modules, it is also important that HRE concepts be reinforced in the other activity areas...' (p. 29).

Within their response, an alternative structure for the NCPE was proposed, incorporating HRE as a specific area of activity at KS two to four, and detailing a PoS for HRE for all KS (ibid, 1991b, p. 19).

In April 1991, representatives of the 'health lobby' (Len Almond, Neil Armstrong and myself) were invited to make a presentation to the WG in Cardiff. Professor Margaret Talbot, one of two key 'educationalists' amongst the NCPE WG (Evans & Penney, 1995a), acknowledged that the 'health/HRE lobby' succeeded in persuading key members of the WG that a 'health orientation' offered a wider range of opportunities to children of varying ability than did the 'traditional' competitive sports approach (Talbot, 1993, p. 42). Talbot (1993) also credits the 'health lobby' with helping PE to retain its place in the NC at all KS, explaining that:

During a time of almost "moral panic" about the state of the nation's youth, the power of representations from the medical profession and health organisations (like the Health Education Authority) on the importance of physical activity for the physical and moral development of young people was significant.... At no other time had Government Ministers been assailed by so many letters on the NC from distinguished medical consultants, whose points they seemed loathe to ignore (p. 50).

However, additional information obtained from a thesis containing interview data with Professor Margaret Talbot, suggests that the 'health lobby' presentation had only limited success (Mannseur, 1992). Within the thesis, Mannseur stated that 'What appears to be little known is that the Working Party had initially decided that a health focus might best be satisfied with *a more direct, explicit approach*' (ibid, 1992, p. 63, original emphasis). It was further reported by Mannseur that the 'HRE lobby', in making presentations to the group regarding the rationale and importance of HRE, "...failed to convince us (the WG) that HRE should be anything less than a permeation model" (Talbot cited in Mannseur, 1992, p. 63) and specifically failed in satisfying the group that HRE "...was actually a very educational approach. The most damning thing was the inference that HRE was simply repetitive movements, the boredom of which can be relieved by playing music or telling jokes" (ibid, 1992, p. 63). In Talbot's view, such an approach went against the ethos of PE stated in all their documents where: "The mind must be engaged, otherwise why is it in the National Curriculum? Why is it not just a playground drill?" (ibid, 1992, p. 63). She continued:

I think we were waiting to be convinced and we were very open-minded. We had already made the decision that we would try to clear space in key stage 3 in

order to allow more room for HRE if that conviction had been brought across, but it wasn't (ibid, 1992, p. 63).

Mannseur (1992) commented that 'the shortcomings of the HRE lobby to include content in their presentations relating to the development of the cognitive and affective realms must be questioned, because some would say that a great chance has been missed' (p. 64). However, Mannseur (1992) reported that the members of the WG did consider that the lobby was effective enough to give HRE a 'strong cross-curricular emphasis' and Professor Talbot stated that much of the HRE input in the NC documentation (particularly the Appendix material) was originally written by members of the 'health lobby'.

2.4.3 HRE in Later Developments of the NCPE

Following the consultation period relating to the IR, the WG continued its task of developing proposals for a NCPE and published its Final Report (FR) in August 1991 (DES & WO, 1991b). Within this, the three ATs identified in the IR were encompassed in a single AT designed to '...emphasise the holistic nature of physical education...' (ibid, p. 17). As within the IR, health-related aspects of PE were 'permeated' through the activity area-based structure adopted for the subject. Health-related elements were incorporated within the ATs, EKSS and PoS (Table 2.4) but HRE was not granted the status of an activity area. However, within the FR it was stated that although 'the programmes of study are framed around areas of activity...there will be times when it may be appropriate to draw all the information together in lessons focusing on the effect of exercise on the body' (ibid, p. 46). Furthermore, the FR contained a separate section on HRE (much of which originated from the HPEP response to the IR) which highlighted the 'urgent need for a coherent programme of **education about exercise** in order to establish its relevance and stimulate increased activity patterns' and which stated that HRE 'may be delivered either through structured programmes of exercise with a health-related practical knowledge base, or by applying the same knowledge to PE activities' (ibid, p. 62, original emphasis). The FR commented on the contribution that each of the areas of activity could make to knowledge about the effects of exercise and stressed the importance of reinforcing HRE concepts through the areas of activity (ibid, p. 63). With particular reference to gymnastics, it was stated:

We have ensured sufficient flexibility within the programmes of study for health related exercise to be included as one of the activities within the gymnastic activities area of activity at key stage 4. This will allow the inclusion of structured work on the contributions to health and fitness of aerobic, anaerobic

and weight bearing exercise, and of a range of activities, including jogging, brisk walking, skipping, aerobics, keep fit, circuit training and weight training (ibid, p. 62).

KS1

Pupils should be able to describe what they and others are doing and recognise the effects of physical activity on their bodies.

KS2

Pupils should be able to sustain energetic activity over periods of time and understand the effects on the body.

KS3

Pupils should be able to understand the short and long term effects of exercise on the body and decide where to focus their involvement in physical activity for a healthy and enjoyable lifestyle.

KS4

Pupils should be able to prepare and carry out personal programmes for a healthy and enjoyable lifestyle, considering the use of community resources where appropriate.

Table 2.4 EKSS Relating to HRE within the FR for PE (DES & WO, 1991b)

In responding to the FR, the 'health lobby' were critical of the failure to mention health in the rationale for PE or to identify it as a discrete area within the PoS (Fox, 1992; Harris, Almond, & McGeorge, 1991) and the PEA (1991) also highlighted this 'apparent omission' which they urged be revised 'as a matter of urgency'. In Fox's (1992) view, the FR offered '...a set of well thought out objectives and outcomes, but an inadequate structure for their delivery' (p. 10). He explained: 'Although health-related concepts should always be reinforced through other activities, they will always remain incidental and superficial unless at some point they provide the central focus in a distinct programme of study' (ibid, p. 10). More explicit guidance for teachers was requested on how to address health issues in the PE curriculum (Harris et al., 1991; PEA, 1991).

In particular, the HPEP group (Harris et al., 1991) were critical of the 'under-estimation' of the HRE practical knowledge base. The group called for a more structured approach with HRE as an 'activity area in its own right with its own clearly identifiable PoS' (ibid, p. 2). In agreement, Fox (1992) stated that: 'The content is too important and complex to be delivered in piecemeal fashion as incidental to other activities on the football field or in the gymnasium' (p. 9). Although the FR pointed to the 'opportunities' to address HRE within gymnastic activities at KS four, and

identified each area as 'lending itself' to the reinforcement of HRE concepts, HRE advocates pointed to the constraints of a conventional activity area-based curriculum in terms of encouraging independent commitment to active lifestyles, and with respect to 'overlooking' activities associated with health benefits and enjoyed by many young people, such as jogging, aerobics, circuit and weight training (Harris et al., 1991). The FR appeared to partly recognise the former concerns within a section on HRE in which it was stated:

...for permeation to be effective and successful, teachers will need to be well informed and have good understanding of the knowledge base of health related exercise, the psychology and philosophy underlying long-term participation in exercise, and the scope and limitations of PE in contributing towards improving children's attitudes and habits (DES & WO, 1991b, p. 62).

However, in the context of declining INSET provision and changing initial teacher-training (ITT) (Evans & Penney, 1994), Penney (1994) considered it unlikely that teachers would be adequately equipped to effectively deliver cross-curricular matters. Indeed, Penney's view (1994) was that limited reference to such matters within the ATs, EKSS and PoS meant that the FR failed to emphasise or encourage their expression in 'practice'. Furthermore, the report itself stressed the need for 'thorough planning' of this 'reinforcement' to avoid 'messages' being 'lost' (DES & WO, 1991b, p. 62).

The next phase in the making of the NCPE was the production of a Consultation Report on PE in December 1991 (NCC, 1991a) which outlined PoS applicable to all KS, and for each KS, detailed both activity specific and general PoS (the latter being applicable to all areas of activity). Within this report, the practical emphasis of the subject was made more explicit and games was further privileged (ibid, 1991). These changes were viewed by some as endorsing central government's cultural restorationist position and expectations (Ball, 1990; Evans & Penney with Davies, 1993; Penney, 1994). Much of the text from the FR such as that relating to cross-curricular issues was relegated to non-statutory guidance (NSG) (NCC, 1992a). The Consultation Report contained a summary of the 1393 responses to the FR, within which it was reported that fifteen per cent of respondents commented that HRE/HRF should be regarded as a discrete area of activity (NCC, 1991a, p. 37). There followed a series of seven conferences organised by the NCC between February and March 1992, the aim of which was to disseminate and invite comment on the consultation findings on the draft proposals for the NCPE (NCC, 1992b). The structure of the conferences focused on 'guided' discussion of identified topics, one of which was cross-curricular matters. The report on these

conferences, published in April 1992 revealed that, in addressing the topic of cross-curricular matters, issues were reported such as the need for a whole-school approach and the suggestion that greater priority be given to cross-curricular matters in ITT (ibid, 1992b). The report stated that certain topics were discussed on several occasions including 'how to raise awareness of cross-curricular issues' and 'whether the NC for PE had given sufficient attention to HRE' (ibid, 1992b, pp. 9-10). The report concluded that there were many issues still to be resolved as schools moved towards the first year of implementation. A further source of information on teachers' views was an analysis of questionnaires completed by year seven teachers in which it was reported that most of their concerns centred around the provision of dance and OAA (ibid, 1992b). In particular, INSET was requested on dance and OAA in addition to assessment and cross-curricular opportunities (ibid, 1992b). The questions focused on the six areas of activity with no specific question addressing HE or HRE. However, within a section of the report entitled 'other issues related to NC PE' were listed some comments made by respondents relating to 'health' such as 'insufficient emphasis on HRF' and 'uncertainties about the place of HRF' (ibid, 1992b, pp. 12-13).

The draft orders for PE were later produced permitting a consultation period of just one month before being passed through parliament. The advocates of HRE still pursued the case for HRE to be a key, if not defining, feature of the NCPE, as evidenced by Fox's (1992) statement that:

...although preparation for lifetime exercise is not the only goal of physical education, I believe it to be the singular greatest contribution that we can make to the quality of life of people. It should therefore underpin our existence in the school curriculum and dominate the shape and content of what we teach and how we teach it (p. 8).

However, with pressures for a reduction in the number of areas to be covered in the NCPE, the increasing emphasis on games and performance, and the time-constraints of the process (Evans & Penney, 1995a; Penney, 1994), it became increasingly apparent to Penney (1994) that any major re-structuring of the existing areas or the 'addition' of an area such as HRE was not an option in the further development of the NCPE. Nevertheless, within a detailed response to the draft statutory order for PE, the HPEP requested further changes such as reference to 'health and well-being' within the rationale for PE, and a statement within the NSG proposing that HRE can be delivered in focused blocks of work in addition to it being reinforced through the activity areas (HPEP, 1992). The HPEP also provided suggestions for modifications to the EKSS and again expressed concern about the 'homelessness' of 'popular lifetime health-

promoting activities' and the need for the HRE knowledge base to be comprehensive and effectively delivered in order to promote exercise independence (ibid, 1992, pp. 9-10).

The statutory orders for the NCPE (DES & WO, 1992) were similar in content to the draft orders. The skeletal form of the NCPE presented the scope for variations in interpretation and created the capacity for 'slippage' (Bowe, Ball, with Gold, 1992) to occur in 'implementation' within clear boundaries. The view was expressed that '...flexibility can be seen as a strength in that it allows us to make our own interpretations of the document' (Murdoch, 1992, p. 16). The NCPE was received in schools close to the end of the academic year (May to June 1992) with 'implementation' due to commence the following term (September 1992). Thus, it was '...tempting for some to simply read and apply within existing practice the substance of the orders and Non-Statutory Guidance' (ibid, 1992, p. 16).

2.4.4 The Position of Health within the NC and the NCPE

Having detailed the development of health issues during the making of the NCPE, it remains to consider the position accorded to HE and HRE within the NC and within the initial and revised versions of the NCPE (DES & WO, 1992; DfE & WO, 1995; NCC, 1990). Within the NC, HE was one of five cross-curricular themes which, whilst given recognition, were not provided with the formal structure and timetable for 'implementation' that was detailed for the core and foundation subjects. The wish was expressed that HE should not be seen as an additional subject in the curriculum but should be taught through a variety of curricular areas and reinforced through the wider aspects of school life (NCC, 1990). Within the cross-curricular theme of HE, HRE was one of nine components (Table 2.5), the others being substance use and misuse, sex education, family life education, safety, food and nutrition, personal hygiene, environmental and psychological aspects of HE (ibid, 1990). The themes were essentially integrated into subjects rather than either having a clear place and identity of their own or being the defining features of the subjects. Reconciling cross-curricular themes within a strongly subject-based NC was considered by some to be problematic and concerns were expressed about their 'status' and likely expression in 'practice' as a result (Rowe & Whitty, 1993). Furthermore, Vulliamy & Webb (1993) considered that both the non-statutory status and 'late arrival' of the NCC's guidance on cross-curricular themes contributed to these documents receiving 'scant attention' in schools.

KS1

Pupils should know that: (a) people feel better when they take regular exercise, (b) exercise uses energy which comes from food.

KS2

Pupils should know that: (a) exercise strengthens bones, muscles and organs and keeps the body supple, (b) if energy intake is greater than energy expenditure of energy, the body stores the excess as fat.

KS3

Pupils should know that: (a) energy expenditure should be increased whenever possible and that exercise is the only voluntary way to do this, (b) regular exercise influences body shape and allows daily activities to be performed more easily, (c) regular exercise can help to alleviate stress and anxiety.

KS4

Pupils should: (a) know that regular exercise promotes well-being and improves bodily health, (b) know that regular exercise increases the functional capacity of people of all ages and can help those who are disabled or chronically ill, (c) understand the advantages of incorporating regular exercise as part of their lifestyle, to improve their health - both physical and mental.

Table 2.5 HRE within HE in the NC (NCC, 1990)

Ultimately, the NCPE statutory order (DES & WO, 1992) featured aspects of HRE in the general requirements and in the general EKSS (Table 2.6), and some examples of 'appropriate practice' were provided in NSG (NCC, 1992a). Such examples included warming up appropriately before playing games, dancing or sprinting, and knowing and understanding the reasons for changes in the pulse rate and body temperature during and after physical activity (NCC, 1992a, G3). Examples of aspects of HRE in the general requirements included pupils being taught to: 'engage in whole body activities and those developing flexibility and strength; understand the importance of warming up for, and recovery from, exercise; adopt good posture and the correct use of the body; lift, carry and place equipment safely' (DES & WO, 1992, p. 3).

KS1

EKSS: pupils should be able to recognise the effects of physical activity on their bodies.

PoS (General): pupils should be made aware of the changes that happen to their bodies during exercise.

KS2

EKSS: pupils should be able to sustain energetic activity over appropriate periods of time in a range of physical activities and understand the effects of exercise on the body.

PoS (General): pupils should be taught to: (a) understand the value of and demonstrate sustained activity over appropriate periods of time, (b) understand the immediate and short term effects of exercise on the body, (c) understand and demonstrate how to prepare for particular activities and to recover afterwards.

KS3

EKSS: pupils should be able to understand the short and long term effects of exercise on the body systems and decide where to focus their involvement in physical activity for a healthy and enjoyable lifestyle.

PoS (General): pupils should be: (a) given opportunities to plan and undertake simple and safe health related exercise in the context of different areas of activity, understanding the principles involved, (b) taught to understand the short and long term effects of exercise on the body systems, (c) made aware of the increasing need for personal hygiene in relation to vigorous activity, (d) taught how to prepare for and recover from specific activity.

KS4

EKSS: pupils should be able to prepare, carry out and monitor personal programmes for a healthy and enjoyable lifestyle, considering the use of community resources where appropriate.

PoS (General): pupils should be: (a) shown how to use the various opportunities for physical activity in the local area, (b) encouraged to show that they undertake regular physical activity conducive to a healthy and enjoyable lifestyle, (c) taught to understand how to organise and monitor an activity schedule that leads to an improvement in fitness.

Table 2.6 EKSS and PoS Relating to HRE within the NCPE (DES & WO, 1992)

Despite the loss of much of the detailed text on HRE from the FR and its apparently subordinated status within the NCPE, the advocates of HRE attempted to work within these limitations to secure a place and some clear representation for HRE within school PE curricula. Guidance was published for teachers highlighting the requirement and

scope within the text of the NCPE to address HRE in PE in a structured way through discrete and/or permeation based modes of delivery (Harris & Elbourn, 1993). Reports on regional monitoring seminars on issues concerning implementation of the PE Order revealed that the main concerns for teachers seemed to focus on the following issues: PE time, the place of swimming, resource issues associated with OAA and dance (and, in some schools, gymnastics), help with SEN pupils, assessment, and the pace of change (NCC, 1993). As in previous NCC 'consultation' conferences, the structured document used to stimulate discussion at the seminars did not specifically address cross-curricular matters or HRE issues.

In 1993, due to mounting concerns from the teaching profession about the manageability of the NC, the government commissioned Sir Ron Dearing to look into the scope for 'slimming' the NC. An interim report produced in July 1993 contained substantive proposals to revise the NC, one of the options at KS four being to remove the statutory requirement to study PE (plus technology, a modern foreign language, history, and geography) (Dearing, 1993). However, the final report included PE as a mandatory requirement at KS four (along with English, mathematics, single science, and short courses in a modern foreign language and technology). The rationale for maintaining PE was stated as being that 'we must encourage our young people to develop a fit and healthy lifestyle' (Dearing, 1994, p. 45). Thus, the net effect of the review process was that the requirement for foundation subjects to be included throughout all the KS was amended and, although PE retained a place at all KS, some foundation subjects, for example history and geography were no longer statutory at KS four.

On the recommendation of the Dearing review (1994), each subject in the NC was revised, and in May 1994 the School Curriculum and Assessment Authority (SCAA), which was established to review the curriculum, examinations and assessment, published their draft proposals for the revision of PE (SCAA, 1994a). Within the proposals it was explained that:

The statements concerning health-related exercise in the programmes of study (activity-specific) and in the general requirements have been amended and transferred, where appropriate, to the introductory paragraphs for each key stage. They have been placed here to show that they should permeate the areas of activity and need not be taught in isolation (ibid, p. ii).

A response from the PEA (1994) commented that the inclusion of HRE in the introductory paragraphs for all KS would help ensure that health permeated the whole

PE curriculum from five to sixteen years. However, the PEA (1994) questioned whether the emphasis on sport in the form of competitive games would be at the expense of other activities, and whether the promotion of HRE was best served through games. The PEA (1994) also commented that the restriction of choice at KS four would hinder the promotion of life-long physical activity. It added that little could be expected in terms of the promotion of health and the development of ability, if activities were taught for a relatively short time, stating that regularity and intensity of experience are essential to good health and quality performance (ibid, 1994). A response from BAALPE (1994) to the draft proposals similarly stated:

It is necessary to question whether the importance of Health and active lifestyle is best served by a games-dominated curriculum. The current provision for health-related exercise needs to be addressed, as does the place of more discrete HRE particularly within KS3 and KS4 (p. 73).

The CCPR response (1994) to the draft proposals for PE included the comment that emphasis should be placed upon pupils being physically active to the point where they become out of breath. The CCPR also requested clarification of prescriptive elements of the HRE statements such as how many times a week and for how long pupils should be active. A personal response to the PE draft proposals was sent in June 1994 recommending some minor changes to HRE statements within the PoS and the EKSS (Harris, 1994a). Additional comments were made regarding the 'permeation model' and the mode of organisation and delivery (ibid, 1994a). Despite receipt of the above-mentioned responses, a report by SCAA (1994b) on the review of the NCPE containing a brief summary of comments from four national conferences, six seminars and 4072 written responses, contained no reference to HRE.

The Final Orders for PE were published and distributed to schools in January 1995 (DfE & WO, 1995). The NCPE revision resulted in health-related aspects of PE being moved from the PoS for specific areas of activity to become part of the introductory statements for each KS and included within the 'End of Key Stage Descriptions' (EKSD) which replaced EKSS (Table 2.7). With the exception that issues relating to warming up for and recovering from activity moved from KS two to KS three, and issues relating to personal hygiene moved into the general requirements (applying to all activities and all KS), there were few changes to the content of HRE within the NCPE. As in the 1992 version of the NCPE, some aspects of HRE were included in the general requirements, examples being that pupils be taught to engage in activities that develop cardiovascular health, flexibility, muscular strength and endurance, and be taught to warm up for and recover from exercise (DfE & WO, 1995).

KS1

Pupils should be taught: (a) about the changes that occur to their bodies as they exercise, (b) to recognise the short-term effects of exercise on the body.

KS2

Pupils should be taught: (a) how to sustain energetic activity over appropriate periods of time in a range of physical activities, (b) the short-term effects of exercise on the body.

KS3

Pupils should be given opportunities to engage in health-promoting physical activity, where possible within the local community. They should be taught: (a) how to prepare for particular activities and to recover afterwards, (b) the short-term and long-term effects of exercise on the various body systems, (c) the role of exercise in establishing and maintaining health.

KS4

Pupils should be given opportunities to participate in frequent physical activity conducive to a healthy lifestyle. They should be taught: (a) to plan, undertake and evaluate a safe health-promoting exercise programme, (b) to show understanding of the principles involved.

Table 2.7 HRE within the NCPE (DfE & WO, 1995)

The PEA (1995) response to the new Order for PE in the NC stated that the unique values of PE were clearly prioritised with the high profile that was given to (a) health-related activity, personal hygiene and safety, and (b) practical performance as the essence of PE' (p. 4). However, the PEA (1995) considered that an opportunity to establish cross-curricular dimensions, themes and skills had been 'missed'. An additional comment relating to health issues was that 'while it is appropriate that pupils participate in activities that might lead to a healthy life style, it should be made clear that participating in a PE lesson does not make you 'fit' (ibid, 1995, p. 1). There was also a request for some clarification at KS three of 'what sort of activities would provide 'health promoting activity' within the local community' (ibid, 1995, p. 2). Whilst acknowledging the appropriateness of the HRE statements at KS four, the PEA (1995) considered there to be some confusion concerning the implementation of these statements and commented that 'while it is not necessarily the role of SCAA to include delivery strategies within the Order, there is clearly a need for some clarification concerning this issue' (p. 3). The response continued:

This problem seems to revolve around the application of the phrase 'personal exercise programme'. Can this be, for example, a sport, or should exercise in this sense be a non-sporting activity, eg. jogging, aerobics, etc? Can it be either? Additionally, should the health targets be achieved through the teaching of the two required activities (permeation model) or should discrete schemes of work on health related activities be programmed in a way which will meet the statutory requirements of the Order. The sensible approach would seem to be to allow schools freedom to decide for themselves how they intend to deliver this area without the danger of any potentially conflicting view from outside agencies eg. OFSTED Inspectors (ibid, 1995, p. 3).

Reports on PE in Wales and England have provided some indication of the way in which the HRE requirements of the NCPE are being viewed and interpreted within the profession. The HMI report from Wales (OHMCI, 1995) on PE in KS one, two and three (inspected during the academic year 1993-94) stated that approximately eighty per cent of secondary schools were developing HRE courses, often as part of a modular approach, and that the inclusion of this element tended to reduce the time available for other aspects. The report added that little had been done to incorporate health and fitness considerations within normal classwork (ibid, 1995). The equivalent report on PE in England (OFSTED, 1995) stated that at KS three and four, most pupils showed 'good understanding of the importance of warming up and recovery from exercise as well as the effect of activity on the body. Pupils lift and move equipment with appropriate regard for safety and respond well to instructions' (ibid, 1995, p. 8). The report included an update on developments in PE in which it was stated:

Health related exercise (HRE) takes place either as a separate area of work or is embedded within and permeates the aspects of the programmes of study. There is a need to recognise and record good practice in HRE wherever it occurs... (ibid, 1995, p. 27).

One year later, within a report on 1994-95 inspection findings for KS three and four and post-sixteen, it was stated that:

There are some weaknesses in the planning of health-related exercise. Units on fitness or health-related activity, which do not relate to other aspects of the programme, are often not effective in fulfilling the National Curriculum requirement, particularly when the teacher has insufficient knowledge and understanding to make best use of the time available (OFSTED, 1996a, p. 22).

Within the same publication, key issues for school development arising from the findings were identified and these included:

The teaching of health-related activity should be planned and related to other aspects of the National Curriculum programme, either through permeation or discrete units of work. This requires good organisation and schools will need to monitor the effectiveness of the chosen strategy (ibid, 1996a, p. 23).

There were no references to health issues in PE within the equivalent publication reporting on 1994-95 inspection findings for KS one and two (OFSTED, 1996b). However, within the OFSTED report on standards in primary PE for 1995-96, one of the main findings was that many teachers 'give appropriate focus to the health aspects of the programme of study' (Clay, 1997, p. 53). The OFSTED report for secondary PE for 1995-96 contained no specific reference to health-related aspects of the subject (ibid, 1997).

2.4.5 Health-Related Research and Resources

During recent years, research relating to HRE in the NC has been undertaken (Curtner-Smith, Chen, & Kerr, 1995; Curtner-Smith, Kerr, & Clapp, 1996; Laws & Smalley, 1994; Penney, & Evans with Hennink & Bryant, 1994a, 1994b; Penney & Evans with Hennink, 1994c) and resources have been developed to support and complement the teaching of HRE in the NC. The focus of case study research by Laws and Smalley (1994) was the identification of the dominant elements in defining the form, content and functions of HRE as part of PE knowledge. The conclusion was that the expression of HRE philosophies was constrained in practice by structural and organisational features of schooling together with teacher attitude and style (ibid, 1994).

A similar conclusion was reached by Penney et al. (1994a, 1994b, 1994c) whose research project in fifty-nine secondary schools, twenty-six middle schools and seventy-seven primary schools revealed that most primary school (88%), middle school (96%) and secondary school teachers (95%) stated that HRE was part of the curriculum. The majority of primary schools (71%) and middle schools (70%) associated HRE with specific activities/issues, including warm ups and cool downs, the importance of keeping fit and healthy, diet, taking care of your body, suitable clothing for PE, orienteering and games. Middle school teachers also identified HRE with physiological issues (such as circulation, pulse rate, healthy heart and lungs), circuit training and nutrition. A fifth of middle schools identified HRE as a continual part of their curriculum. Only two (10%) respondents reported providing a separate block of HRE in PE which was in marked contrast to comparable data from the secondary sector

in which 63% of schools provided a discrete block of HRE (typically of five to eight weeks duration). Penney et al. (1994c) stated that the reasons for this contrast needed investigating, but may be related to a more holistic approach to curriculum design and delivery of PE in middle schools, and added that data relating to the areas of activity included in PE and the teaching methods employed provided some support for this suggestion. Twenty per cent of secondary-school respondents associated HRE with specific issues and/or activities, including fitness testing, health and hygiene, body awareness, the importance of exercise, warm ups and cool downs, diet, overnight camps and cross-country. Only nine (17%) schools identified HRE as a continual part of their curriculum. Penney et al. (1994c) stated:

This data clearly contrasts to the emphasis within NCPE documentation, in which HRE is presented as a permeating theme in PE (see DES & WO, 1991a, 1991b, 1992) and raises questions about the delivery of HRE within the NCPE (p. 11).

It was concluded that issues of health (plus equal opportunities, and personal and social education) did not appear to be finding systematic expression in practice in PE in many schools (Penney et al., 1994a, 1994b, 1994c).

The study by Curtner-Smith et al. (1995) involved the observation of secondary school PE lessons to determine the percentage of time: (a) that pupils were engaged in moderate to vigorous physical activity (MVPA), (b) that was allocated by teachers for pupils to engage in fitness activity or acquire HRF knowledge, and (c) that teachers used behaviour likely to encourage pupils to participate in health promoting physical activity. The subjects were twenty PE teachers in one town in South-West England. Two lessons of each teacher's choice, in which they taught any activity to years seven, eight or nine, were videotaped and the lessons were coded with SOFIT (System for Observing Fitness Instruction Time), an observational instrument developed to quantify factors thought to promote HRF in PE. Results indicated that pupils spent little time in MVPA likely to promote health benefits, that teachers allocated no time for pupils to engage in fitness activities or receive fitness knowledge, and that teachers spent no time directly promoting or demonstrating fitness (ibid, 1995). As a consequence of the findings of a later study repeating the above methodology, Curtner-Smith et al. (1996) stated that the introduction of the NCPE may have negatively impacted the amount of time pupils participated in MVPA in lessons yet had a slightly positive impact on the amount of health-related content included during lessons.

With respect to resources, a number have been produced to support the teaching of HRE in schools. For example, the Northern Ireland Education and Library Boards (1994) have produced a video and accompanying booklets to support the teaching of HRPE within their own NC which has HRPE as a compulsory element at KS four alongside the activity areas (Department of Education Northern Ireland (DENI), 1991, 1996). Other examples of more recent teacher resources for health-related work in PE are an American series of HRF books (Hopper, Fisher, & Munoz, 1997a, 1997b, 1997c), a text for elementary schools in America (Virgilio, 1997), and two for primary schools in England and Wales (Harris & Elbourn, 1997; Pain et al., 1997).

2.5 Section 4: The Effectiveness of HRPE Programmes in Schools

Given the development of HRPE and its place within the NCPE, it is relevant to consider what evidence there is for its effectiveness. This section reviews the effects on children of formally-evaluated HRPE programmes in schools (see also Harris & Cale, 1997a). A number of health-associated outcomes are considered including physiological measures (aerobic capacity, muscular strength and endurance, flexibility), clinical measures (body composition, blood pressure, blood lipids), behavioural aspects (activity levels and dietary habits), cognitive measures (knowledge and understanding), and affective measures (attitudes towards physical activity, PE or school). The review includes only those HRPE programmes in primary and secondary schools which have been formally evaluated; it does not include the many programmes for which only descriptions or subjective forms of evaluation are available. The studies reporting HRPE programmes which have been implemented and evaluated in primary schools are presented in Table 2.8 and those in secondary schools are detailed in Table 2.9. Selected characteristics of the studies are presented including the country of origin, the study design and sample size, the type and length of the programme, and the reported outcomes. Daily PE programmes refer to those involving PE each day while augmented programmes are those which are over and above usual PE time but not on a daily basis. Non-augmented programmes are those which have been incorporated within existing PE time.

Table 2.8 Primary School HRPE Programmes (in chronological order)

Study Details (author(s); year; country; type of programme; sample; design)	Physiological (HRF components) and Clinical Outcomes	Behavioural Outcomes: Physical Activity & Diet	Cognitive Outcomes: Knowledge & Understanding	Affective Outcomes: Attitudes
MacDonald (1961); France; daily; 64 children (11-12yrs); experimental & control groups.	Increases in a range of physical measures.		Increase in academic performance.	Increase in attitude measures.
Shephard et al. (1980); Canada; daily; 546 children (10-12yrs); experimental & control groups; 6 year intervention.	Increase in aerobic capacity and muscular strength.	Increase in vigorous weekday activity and in weekend activity levels.		
Geenen et al. (1982); USA; augmented; 79 children (6-7yrs); experimental & control groups; 8 month intervention.	Higher mean heart rates; increase in left ventricular mass.	Increase in vigorous physical activity.		
MacConnie et al. (1982); USA; augmented; 59 children (6-7yrs); experimental & control groups; 8 month intervention.		Increase in vigorous physical activity.		
Duncan et al. (1983); USA; augmented; 34 children (10yrs); experimental & control groups; 9 month intervention.	Increase in aerobic capacity/performance, flexibility and strength.			
Dwyer et al. (1983); Australia; daily; 500 children (10yrs); 3 groups: fitness, skill & control; 14 week intervention with 2 yr follow up (+ examination of blood pressure (BP) & lipids).	Increase in aerobic capacity and decrease in body fat for fitness group; no change in blood lipids or BP after 14 weeks but decreased BP in boys after 2 years.		No evidence of any loss of academic performance.	
Siegel & Manfredi (1984); USA; augmented; 109 children (8yrs); experimental & control groups; 10 month intervention.	Increase in aerobic capacity.			

Worsley & Coonan (1984); Australia; daily; 420 children (10yrs); 3 experimental treatment groups and 1 control group; 6 month intervention.	The combined treatment group (daily PE + self-monitoring of diet & activity + health knowledge) showed a decrease in body fat.		Increases in health and body knowledge for treatment groups with health knowledge.	
Taggart et al. (1986); USA; augmented; 12 'low-fitness' children (9-12yrs) & families; 8 week intervention + 4 week follow-up.	Increases in health fitness (especially aerobic capacity and back strength).	Increase in activity levels of 11 of the 12 children.		
Simons-Morton et al. (1988a); USA; augmented; 1293 children (8-9yrs); experimental & control groups; 2 year intervention (+ examination of dietary behaviour).		Increase in fitness activity time and in dietary behaviour (after 1 year follow-up).		
Walter et al. (1988); USA; augmented; 3388 children (9-10yrs); experimental & control groups; 5 year intervention (+ examination of additional CHD risk factors).	No change in aerobic capacity, body mass or blood pressure. Favorable trends in cholesterol levels.	Favorable trend in dietary intake.	Increase in health knowledge.	
Werner & Durham (1988); USA; augmented; 130 children (9-11yrs); experimental & control groups; 9 week intervention.	Increase in aerobic capacity, strength, flexibility and body composition measures.			
Abbott & Farrell (1989); UK; augmented; 111 children (10-11yrs); experimental & control groups; 7 month intervention (+ examination of dietary and smoking behaviours).		Increase in physical activity, especially for girls.		

Pollatschek & O' Hagan (1989); UK; daily; 399 children (10-11yrs); experimental & control groups; 1 year intervention.	Increases in aerobic performance, muscular power/endurance (upper body) but not sit-ups & flexibility.		Non-significant increase in academic achievements.	Non-significant increase in attitude to school.
Birtwhistle & Brodie (1991a); UK; augmented; 62 children (10-11yrs); case study methodology; 2 term HRF intervention programme.			Conceptual HRF programme contributed to pupil understanding.	
Hansen et al. (1991); Denmark; augmented; 137 children (9-11yrs); 8 month intervention (+ examination of blood pressure).	No changes in aerobic capacity or blood pressure (after 3 months); improvements in both (8 months).			
Gleave & Stratton (1992); UK; non-augmented; 22 boys (10yrs); experimental & control groups.	Heart rate readings elevated in modified PE lessons (included 6 mins continuous activity).			
McGuinness & Coleman (1992); UK; daily; 48 children (11yrs); experimental & control groups; 6 week intervention.	Significant improvement in speed shuttle run performance but not in other fitness measures.			
Ignico & Mahon (1993, 1995); USA; augmented; 28 low-fit children (8-10yrs); experimental & control groups; 10 week intervention (+ examination of blood lipids).	Increases in aerobic performance and flexibility but not in body fatness, blood lipid levels or cardiorespiratory fitness (as measured on treadmill).			
Mahon et al. (1993); USA; daily; 24 children (6yrs); experimental & control groups; 1 year intervention.	Increases in aerobic performance, muscular strength/endurance and flexibility but not in body fatness or cardiorespiratory fitness (as measured on treadmill).			

McKenzie et al. (1993); USA; non-augmented; 28 classes (9yrs); 3 conditions: trained classroom teachers, PE specialists; control; 12 month intervention.	Children in specialist and trained groups performed better on fitness measures (aerobic performance and sit-ups).	Children in specialist and trained groups were engaged in more activity during PE lessons.		
Sander et al. (1993); USA; augmented; 24 PE teachers & 134 classroom teachers; collaborative inter-disciplinary learning approach (after a minimum of 3 months intervention).		50% PE & 37% class teachers felt that children had increased their participation in aerobic activities.	54% PE & 18% class teachers felt that children's cardiovascular fitness knowledge had increased.	79% PE & 66% class teachers felt that children had increased motivation for aerobic activities at school.
Shephard & Lavalley (1993, 1994); Canada; daily; 546 prepubescent children (7-12yrs); experimental & control groups; 5 year intervention.	Increases in aerobic capacity and strength.			
Piéron et al. (1994, 1996); Belgium; daily; 14 schools; over 3,000 children (5-11yrs); experimental & control groups; 3 year intervention.	Children in experimental schools achieved better performances in most fitness and motor performance tests.	Children in experimental schools were less involved in out-of-school sports clubs.		More favourable attitude to PE and to school reported by pupils; teachers had more positive perceptions of PE.
Westcott et al. (1995); USA; augmented; 24 overfat children (9-10yrs); experimental & control groups; 8 week intervention.	Significant increase in lean weight.	Improvements in eating and physical activity habits (self-reported).		Positive attitude to programme reported by pupils, teachers, parents.
McKenzie et al. (1996); USA; non-augmented; 96 elementary schools in 4 states; schools randomly assigned to treatment conditions; 2,096 PE lessons analysed; over 4,000 children; experimental & control groups; 2.5 year intervention.	Non-significant increase in performance on a 9-minute run test by children in intervention schools.	Children engaged in more moderate-to-vigorous physical activity in PE lessons; children reported more daily vigorous activity.		

Table 2.9 Secondary School HRPE Programmes (in chronological order)

Study Details (author(s); year; country; type of programme; sample; design)	Physiological (HRF components) and Clinical Outcomes	Behavioural Outcomes: Physical Activity and Diet	Cognitive Outcomes: Knowledge & Understanding	Affective Outcomes: Attitudes
Cooper et al. (1975); USA; augmented (to daily PE classes); 1215 boys (15yrs); experimental & control groups; 15 week intervention.	Increases in aerobic capacity/performance.			
Lynch (1981); USA; daily; 86 children (11-13yrs); experimental & control groups; 6 month intervention.	Increases in aerobic capacity/performance and muscular strength/endurance.		Increases in academic achievement.	
Green & Farrally (1986); UK; non-augmented; 12yrs (2 classes) & 15yrs (year group); experimental & control groups; 2 separate studies; 10 week interventions.	Aerobic performance improved (15 yr old group only) & level of basketball skill similar (15 yr old group).	Feedback from parents suggested increases in activity levels (12 yr old group).	Increased understanding of the importance of aerobic fitness (12 yr old group).	Increased positive attitude to physical fitness (12 yr old group).
Dragevick et al. (1987); New Zealand; daily; approx. 275 children (11-12yrs); experimental & control groups; 12 month intervention.	Improvements in 500m run and flexibility (boys & girls) and in speed run & strength (boys). Differences were lost when programme was not maintained.			
Caldecott (1988); UK; non-augmented; 27 secondary age children; + examination of attitudes and behaviour relating to diet, stress, drugs.		Majority claimed to have increased activity levels and to have improved their diet.		Increased positive attitude to exercise and nutrition but not so for stress and drugs.
Youldon (1988); UK; augmented; 57 children (12-13yrs); experimental & control groups; 12 week intervention.				Significant increase in positive attitude to exercise/health issues.

Phillipp et al. (1989); USA; daily; 136 children (14-17yrs); experimental & control groups; 6 week intervention.	Increase in aerobic performance but no difference in composite fitness scores.	Little improvement in self-reported health risk factors and behaviours.		
Jones (1990); UK; non-augmented; 442 children (13-14yrs); experimental & control groups; one term intervention (12 weeks approx).	No improvements in aerobic performance.	No increase in self-reported activity levels.		Significant increase in attitude to PE of the girls.
Birtwhistle & Brodie (1991b); UK; non-augmented; 121 children (13yrs); HRF and SRF groups; 20 single (35 mins) school periods intervention.				HRF group showed improvements in ability to relate subjective and objective information.
Goldfine & Nahas (1993); USA; augmented; 90 children (14-16yrs); experimental & control groups; 12 week intervention.		No significant change in physical activity behaviour.	Significant improvements in HRF knowledge.	Significant increase in attitude to activity but not towards PE.
Jun Li & Dunham (1993); USA; non-augmented; 72 children (12-16yrs); 24 PE classes videotaped.	21% of classes produced fitness overload (heart rate over 144 bpm) (highly & moderately skilled pupils more than low skilled).			
Williams et al. (1993); USA; non-augmented; children (12yrs); 3 experimental treatment groups & 1 control group.			Body fat knowledge increased as skinfolds were being measured.	

2.5.1 The Effects of HRPE Programmes in Primary Schools

Daily HRPE programmes in primary schools have resulted in a wide range of positive outcomes, including increased aerobic capacity or performance (Dwyer et al., 1983; Mahon et al., 1993; McGuinness & Coleman, 1992; Piéron et al., 1994, 1996; Pollatscheck & O'Hagan, 1989; Shephard et al., 1980; Shephard & Lavallee, 1993), muscular strength and endurance (Mahon et al., 1993; Piéron et al., 1994, 1996; Pollatscheck & O'Hagan, 1989; Shephard et al., 1980; Shephard & Lavallee, 1994), flexibility (Mahon et al., 1993; Piéron et al., 1994, 1996), reduced body fat (Dwyer et al., 1983; Worsley & Coonan, 1984) and lowered blood pressure (Dwyer et al., 1983). In addition, daily programmes have been found to result in increased activity levels (Shephard et al., 1980), more favourable attitudes towards school and PE (Piéron et al., 1994, 1996), and an increased ability to understand and retain advanced health concepts (Worsley & Coonan, 1984). Further, there has been no evidence of a loss of academic performance due to daily PE despite a loss of formal teaching time (Dwyer et al., 1983; MacDonald, 1961; Pollatscheck & O'Hagan, 1989). However, McGuinness and Coleman (1992) found little difference in fitness outcomes between daily and non-daily PE groups and concluded that daily PE did not seem to be more advantageous than a normal curriculum. Similarly, Pollatscheck and O' Hagan (1989) found no significant differences in sit-up and flexibility measures between daily and non-daily PE groups. Also, Mahon et al. (1993) found that whilst daily PE resulted in some enhanced fitness measures, no improvements were found in cardio-respiratory fitness (assessed during treadmill exercise) or body fatness, and Dwyer et al. (1983) found no change in blood lipids as a consequence of a daily PE programme. Furthermore, Piéron and colleagues (1994, 1996) found that daily PE favourably influenced fitness and motor performance, and pupil and teacher attitudes towards PE, yet negatively affected pupils' involvement in out-of-school sports clubs.

A number of positive outcomes have been found with augmented HRPE programmes with young children. Compared to usual PE, improvements have been found in aerobic capacity or performance (Duncan et al., 1983; Hansen et al., 1991; Ignico & Mahon, 1993, 1995; Siegel & Manfredi, 1984; Taggart et al., 1986; Werner & Durham, 1988), muscular strength and endurance (Duncan et al., 1983; Taggart et al., 1986; Werner & Durham, 1988), flexibility (Duncan et al., 1983; Ignico & Mahon, 1993, 1995; Werner & Durham, 1988), and body composition measures (Werner & Durham, 1988; Westcott et al., 1995). In addition, following an eight month aerobic activity programme, prepubescent children have been found to exhibit changes in cardiac structure and function (Geenen et al., 1982). Some programmes, however, have reported equivocal findings. A vigorous activity

programme improved aerobic performance and flexibility but did not improve body fatness, blood lipids or cardiorespiratory fitness as measured during treadmill exercise (Ignico & Mahon, 1993). The same researchers also found similar results following an after-school physical fitness programme on low-fit children (Ignico & Mahon, 1995). Hansen et al. (1991) discovered that an augmented PE programme improved aerobic capacity and lowered blood pressure yet Walter et al. (1988) found no positive effects on aerobic capacity, blood pressure or body mass although favorable trends in cholesterol levels were detected.

In terms of behavioural, cognitive and affective outcomes, augmented HRPE programmes in primary schools have resulted in increased physical activity levels (Abbott & Farrell, 1989; Geenen et al., 1982; MacConnie et al., 1982; McKenzie et al., 1993; Sander et al., 1993; Simons-Morton et al., 1988a; Taggart et al., 1986; Westcott et al., 1995) and improved dietary behaviour (Simons-Morton et al., 1988a; Walter et al., 1988; Westcott et al., 1995), more favourable attitudes towards physical activity (Sander et al., 1993; Westcott et al., 1995), and increases in children's knowledge of health and fitness concepts (Birtwhistle & Brodie, 1991a; Sander et al., 1993; Walter et al., 1988).

Fewer studies were found in which attempts had been made to utilise existing PE time differently. One such study by Gleave and Stratton (1992) showed that it was possible to modify existing PE lessons to include six minutes of continuous activity which was considered conducive to the development of cardiorespiratory fitness. Another study by McKenzie et al. (1993) focused on the effect of the teacher on the quantity and quality of PE lessons. It was found that specialist PE teachers had more frequent and longer PE lessons and involved their pupils more actively than did INSET-trained classroom teachers, who in turn were more effective than classroom teachers (McKenzie et al., 1993). A more recent study by McKenzie et al. (1996) has revealed that the implementation of a standardised curriculum and staff development programme increases pupils' activity levels in PE lessons.

2.5.2 The Effects of HRPE Programmes in Secondary Schools

A number of studies in secondary schools in America and New Zealand have demonstrated that daily HRPE programmes have resulted in improved physical fitness in terms of aerobic capacity or performance (Cooper et al., 1975; Dragevick et al., 1987; Lynch, 1981; Phillipp et al., 1989), muscular strength and endurance (Dragevick et al., 1987; Lynch, 1981) and flexibility (Dragevick et al., 1987). In addition, daily HRPE programmes have led to improvements in academic performance (Lynch, 1981). However, not all studies have resulted in positive

outcomes. The study by Phillipp et al. (1989) found no significant improvements in composite physical fitness scores and little improvement in self-reported risk factors and behaviours, and the study by Dragevick et al. (1987) found that fitness improvements only lasted while the programme was maintained. With respect to augmented HRPE programmes in secondary schools, a study by Youldon (1988) found improvements in exercise and health knowledge, and Goldfine and Nahas (1993) detected an increase in positive attitudes towards physical activity, but not towards PE, and no significant improvements in physical activity behaviour.

Non-augmented HRPE programmes in secondary schools have resulted in gains in aerobic capacity or performance, understanding of aerobic fitness, and maintenance of skill levels (Green & Farrally, 1986) as well as improvements in attitudes towards physical activity (Caldecott, 1988; Green & Farrally, 1986) and PE (Jones, 1990), and positive changes in physical activity (Caldecott, 1988; Green & Farrally, 1986) and dietary behaviour (Caldecott, 1988). A study by Williams et al. (1993) showed that body fat knowledge increased during the process of monitoring skinfold measurements, and Birtwhistle and Brodie's study (1991b) found that a HRF course assisted pupils in more closely relating subjective and objective information. However, although the study by Jones (1990) revealed a significantly improved attitude towards PE (especially amongst girls), there was no improvement in aerobic capacity or in self-reported physical activity levels. Caldecott's study (1988) of the effects of a HRF course revealed favourable results relating to attitudes towards exercise and nutrition but less favourable results regarding attitudes towards stress and drug control. Finally, Jun Li and Dunham (1993) concluded from their study that most PE classes are not sufficiently demanding in terms of intensity and duration of exercise to result in an aerobic training effect.

2.5.3 A Review of School-Based HRPE Programmes

Whilst comparisons across studies are problematic due to much variation in sample characteristics and study design, a number of positive physiological, clinical, behavioural, cognitive and affective changes have been reported following the implementation of HRPE programmes. As indicated within previous reviews of HRPE programmes (Simons-Morton et al., 1988b; Sleap, 1990; Tinning & Kirk, 1991), many studies revealed positive outcomes such as increased aerobic capacity, muscular strength and endurance, and flexibility. In addition, the smaller number of studies which have explored behavioural, cognitive and affective outcomes mostly reported positive changes in activity and eating habits, in attitudes towards physical activity, and in improved understanding of health-fitness knowledge.

Further, a few studies (MacConnie et al., 1982; Shephard et al., 1980) showed that increased activity at school did not negatively affect children's activity levels outside of school. However, the results were equivocal for the effects of HRPE programmes on cardiovascular risk factors and clinical outcomes such as body composition, blood pressure and lipid levels (Dwyer et al., 1983; Hansen et al., 1991; Ignico & Mahon, 1993, 1995; Mahon et al., 1993; Walter et al., 1988; Werner & Durham, 1988; Westcott et al., 1995; Worsley & Coonan, 1984).

In considering the limitations of the research studies, Tinning and Kirk (1991) suggested that HRPE studies need to be subjected to critical scrutiny and they highlighted the general inappropriateness of the commonly adopted quasi-experimental approach within a complex social setting such as education, and the fact that, in some studies, there is little evidence of the matching of control and experimental groups except on the basis of age (ie. no matching of social class, teacher proficiency, home environment). Further, it is noted that where experimental and control classes are from within the same school, the problem remains of isolating the effects of HRPE programmes from control groups since such studies create in themselves 'special' conditions in schools (ibid, 1991). Similarly, designs which have adopted control schools within the same catchment area or community may also be influenced by the programme.

A further limiting factor of the studies reviewed are that many are predominantly short-term and thus the longer term effects of HRPE programmes, especially on behavioural, cognitive and affective measures, are not known. Many of the programmes within this review have been evaluated summatively following interventions lasting as little as six to ten weeks (Green & Farrally, 1986; Ignico & Mahon, 1993, 1995; McGuinness & Coleman, 1992; Phillipp et al., 1989; Taggart et al., 1986; Werner & Durham, 1988; Westcott et al., 1995), and three to six months (Abbott & Farrell, 1989; Cooper et al., 1975; Goldfine & Nahas, 1993; Jones, 1990; Lynch, 1981; Youldon, 1988). Longer-term programmes have included those lasting from six months up to one year (Duncan et al., 1983; Geenen et al., 1982; Hansen et al., 1991; MacConnie et al., 1982; McKenzie et al., 1993; Siegel & Manfredi, 1984; Worsley & Coonan, 1984) and between one to five years (Dragevick et al., 1987; Mahon et al., 1993; McKenzie et al., 1996; Piéron et al., 1994, 1996; Pollatschek & O'Hagan, 1989; Shephard & Lavalley, 1993, 1994; Simons-Morton et al., 1988; Walter et al., 1988). It may be that outcomes evidenced from short-term studies are not maintained in the long term, as exemplified by the study by Dragicevick et al. (1987) in which fitness improvements only lasted while the programme was maintained. Alternatively,

some outcomes may not be revealed in the short-term but may become evident after a longer period of time. This scenario occurred with blood pressure measures in a study by Dwyer et al. (1983) which comprised a fourteen week intervention with a follow up two years later.

Additional issues relating to the purpose, design and evaluation of HRPE programmes are addressed in the next section of this Chapter and within Chapter 7 (Section 2, 7.3.2, 7.3.5, 7.3.7; Section 3, 7.4.1, 7.4.2; Section 6, 7.7.7).

2.6 Section 5: Analysis and Critique of HRPE

As a consequence of the relatively rapid development of HRPE and evidence of the effectiveness of some HRPE programmes, HRPE has been the subject of much debate and has attracted both followers and critics. This section documents the ideologies, trends and issues underpinning, influencing and associated with health issues in PE. Although Evans (1989) viewed HRF as 'important, significant and potentially very worthwhile' (p. 189) and Kirk (1988) considered it to be an 'extremely influential force' which could represent the 'threshold of the dramatic re-orientation of PE in schools' (p. 123), the place of health in PE was also considered to be 'problematic' (Almond, 1983a; Kirk, 1986, 1988). During the late 1980s, a critical though welcomed debate on HRF took place amongst physical educators (Colquhoun, 1989; Evans, 1989). Sparkes (1989) believed that, up to this point, there had been uncritical acceptance of HRF from within the profession. However, HRF had received much criticism within the media, as evidenced by a newspaper report ("Barmy Britain", Today, July 1986) and television programme ("Is your child fit for life?", Panorama, BBC, March 1987), in which HRF was viewed (alongside 'games for understanding') as representing the 'new' PE which was portrayed as founded on 'misguided idealism' and which risked undermining the entire structure of British sport (Evans, 1990; Kirk, 1992).

2.6.1 Underpinning Ideologies

A number of ideologies, each representing a set of beliefs and values that in some way distorts or makes reality (Apple, 1979), have been associated with the development of health-related issues in PE. In 1989, Colquhoun commented that HRF had become the target of many criticisms levelled at HE and that previously there had been little in the way of critical examination of HRF in terms of its wider significance and potential for social change. The criticisms levelled at HE focused on it being founded on the ideology of individualism, in which health is viewed as a personal responsibility and is firmly associated with individual 'choices' that are made about health behaviours such as activity and diet (Cribb, 1986). Concepts of 'health' are translated into

questions of individual lifestyle with the implicit suggestion that lack of health is a matter of choice (Sparkes, 1989). Thus, the 'problem' of health and its 'solution' are located firmly and solely with individuals and it is changes in them and their behaviours, rather than social change, that is required to improve health (ibid, 1989). The net effect of such 'victim-blaming' is to ignore the social issues that set limits and constraints on the health of particular groups in society and that are invariably beyond the control of individuals. To quote Sparkes (1989), there is a 'selective blindness regarding other structural issues such as social class, gender, and race that also impact upon health' (p. 212). Sparkes (1989) considers that the emphasis on lifestyle as the realisation of the ideology of individualism diverts attention away from hazards to health and inequalities that exist in relation to health. Kirk (1992) similarly questions the accuracy of the message 'your health is your responsibility' in view of high levels of environmental pollution and the marketing strategies of alcohol and tobacco companies. In Sparkes' (1989) opinion, encouraging people to adopt a healthy lifestyle needs to be part of a wider campaign to reduce or eliminate other health hazards over which individuals have little direct control. Further limitations of individualism identified within the HE literature include its denial of different cultural approaches to health and of lay intelligence, its impositional nature, the dominance of white, male and middle class values, and its reluctance to acknowledge the political determinants of health (Cribb, 1986). Naidoo's (1986) theoretical critique of individualistic HE focuses on its denial that health is a social product, its assumption of the existence of free choice, and its lack of effectiveness.

With respect to the HRF movement, Sparkes (1989) commented on the 'strong tendency...to assume that an homogenous culture exists in which we are all free to choose our lifestyles' and the manner in which 'the social production of health is overlooked and divorced from the social framework that gives it meaning...' (p. 61). Sparkes (1989) considered that an ideological de-construction of HRF was necessary in order to challenge and transform individualism and to acknowledge the social construction of health and illness, an example of the latter being obesity (Colquhoun, 1989) which was previously not a medical issue or problem yet has since become medically defined, assessed and investigated. Sparkes (1991a) stated that there was a need to understand how individualism shapes the way in which the world is viewed and influences the setting of problems resulting in more attention to some issues than others (p. 218). Suggestions were made to include some form of education about the environmental and political limits to health (Sparkes, 1989) and the limitations as well as the opportunities of individualism (Colquhoun, 1989). Evans (1989) considers that individualism is 'very bad news' for PE and provides examples of poor practice such as children learning what they cannot do, what physical shape they cannot but ought

to be, how unfit they are, and how inadequate their diets are (p. 189). His view is that the notion of 'PE for all' 'cannot be taken seriously' until the PE profession addresses wider issues (ibid, 1989, p. 190). In response to Sparkes' (1989) challenge on individualism as the dominant ideology in HE and in HRF, Biddle (1989) argued that the PE profession was right to emphasise the personal responsibility element and the 'controllability' of physical activity (p. 64), but he suggested adopting a self-empowerment strategy in order to develop decision-making capabilities such that individuals are in a position to make realistic health choices.

Writing in 1988, Evans and Clarke stated that, although the new official discourse of PE contained radical elements such as an attack on elitism, on the high status and place given to traditional games, and on the limits of didactic teaching, new initiatives such as HRF were not altering or challenging existing social or ability hierarchies or patterns of power, authority and control. Evans and Clarke (1988) were critical of the fact that the new discourse celebrated individualism, personal power, control and responsibility yet remained silent on class, race, and gender. In their view, the initiatives were 'framed' or constrained within the parameters of convention set by the limits of the official discourse and a teacher's professional training (ibid, 1988). Thus, for Evans and Clarke (1988), the existence of 'PE for all' remained 'some distance away' and they commented that critics of the 'new PE', who were concerned about space and time being taken away from 'proper' PE (in the form of competitive team games), need not fear too much as the 'new PE' fosters and celebrates individualism which 'lies at the heart of conservative ideology' (p. 141). However, Evans and Clarke (1988) recognised that the innovations were 'incomplete and unfinished' and stated that it remains to be seen if the initiatives 'take on a more radical form' (p. 140).

A few years later, the term 'healthism' was coined in reference to individualism as the dominant ideology in HE in schools (Crawford, 1986) and the central construct in HBPE (Colquhoun, 1990). Healthism was described as 'the preoccupation with personal health as a primary focus for the definition and achievement of personal wellbeing' (Crawford, 1986, p. 368) and a belief in the attainment and maintenance of health as a self-evident good (George & Kirk, 1988). In reducing complex causes of diseases to simple lifestyle factors and in providing the illusion that individuals can control their own existence, it was Colquhoun's (1990) view that other avenues for improving health were likely to be ignored. Colquhoun's (1990) description of healthism associates it with self-control and will power, manifest in the 'health ethic' in which sacrifices of time and effort are made to 'work' on health, the reverse leading to feelings of guilt for personal failings such as overeating or underexercising. The over-riding message of healthism is that health comes to those who work hard, meet

the challenge, have self-discipline and take responsibility for themselves (ibid, 1990). Colquhoun (1990) believes that the notion of 'health as self-control' is a major focusing concept in school HE through a mechanistic conception of the body as a machine which requires regular maintenance ('use it or lose it') and a reliance on self-responsibility. A focus on healthy habits implies that individuals have a moral duty to themselves and to society to make intelligent decisions concerning their health. Health may also be seen as an investment in the sense that it needs to be achieved and/or as a form of release associated with freedom from constraints and pleasure seeking with a focus on well-being, improved quality of life, fun, and hedonism (ibid, 1990). Colquhoun (1990) links healthism with consumerism, the latter focusing on self-improvement and self-expression and on an idealised representation of lifestyle involving craving to atone some need or desire which is attached to goods and materials. In Colquhoun's (1990) view, healthism in HBPE is 'opaque and void of critical analysis in the PE field' (p. 249) and he makes the claim that, by focusing on individual lifestyle, HBPE conforms to practices of conventional HE and is severely restricted in its potential for emancipation, social justice, equality and social change (Colquhoun, 1991). Whitehead (1991) has attempted to clarify the aim of political equity and health as the elimination of unjust differences between individuals and the avoidance of health-damaging behaviour as a consequence of severely restricted lifestyle choices.

Evans and Clarke (1988) have also expressed concerns about the emphasis on the 'active mesomorph' as the normative image of healthy, acceptable individuals. Such imagery they suggest disguises profound social differences and functions to devalue other body images. Sparkes (1989) was similarly critical of the portrayal of an 'ideal' lifestyle and its celebration of a white mesomorphic middle class mode of existence. Colquhoun (1989) agrees with Tinning (1985) that the PE profession actively supports the 'cult of slenderness', an idealised conception of the body beautiful built around the notion that thinness equates with attractiveness and happiness. In Colquhoun's (1989) view, PE reinforces messages emphasising a 'socially desirable body image' in which individuals are judged by their weight or appearance, and thinness is equated with self-control, discipline, will-power, and mind over body. Indeed, Hargreaves (1986) suggests that body image represents even more than attractiveness and happiness, and that the mesomorphic image represents ideologically conservative notions regarding achievement, drive and dynamism, discipline, conformity, cleanliness, efficiency, good adjustment, manliness and femininity (p. 170). Colquhoun (1990) refers to children's partial perception of health and fitness, and the fact that for many of them, health equates with a 'good body' and ill-health equates with fatness, perceptions that are supported by my own earlier

research on young people's perceptions of health, fitness and exercise (Harris, 1993, 1994b). Kirk (1988) is critical of the fact that PE does not play a role in educating about such dangers as compulsive dieting and excessive exercising, and Colquhoun (1989) considers that the HRF movement has been conspicuous by its silence on messages and meanings associated with the human body. Indeed, Shilling's (1993) contribution to the emerging literature on the 'sociology of the body' focuses on the tendency for the body to become increasingly central to the individual's sense of self-identity in conditions of high modernity, the latter being represented by the radicalisation of modern trends in the late twentieth century, effects of which have included the decline of religious frameworks and the increasing control of nation-states and the medical profession over the bodies of citizens. Shilling (1993) explains that the net effect is that unprecedented value is placed on the youthful, trim and sensual body and individuals are increasingly seeking methods to control their bodies, for example through diet and exercise.

Colquhoun (1989, 1992) proposes a shift from the ideologies of individualism and healthism towards emancipatory HE in which there is a firm acceptance of the broader issues which impinge upon health and well-being and where the overall aim is to free the constraints on an individual's health. Critical to emancipatory HE is a collective concern for health and the promotion of the individual as a key agent in facilitating social change. In Colquhoun's (1989, 1992) view, there is a need to question taken for granted assumptions concerning health and illness and to place health on the political agenda. However, with respect to HRPE, Colquhoun (1989) suggests that emancipatory social change is limited unless its focus is broadened beyond the scope of the functioning body to include issues such as media presentations of the body and of physical health. Colquhoun (1989) believes that studying the body in a wider social context will result in children developing a better understanding of the influences affecting their decisions about physical activity.

2.6.2 Influencing Trends

Within a cultural critique of HRF, several trends associated with the above ideologies have been identified as influencing the HRF movement, these being medicalisation, economic rationalism, functionalism, and technocratic rationality (Colquhoun, 1989; Kirk, 1988; McNamee, 1988). The term 'medicalisation of everyday life' was used by Colquhoun (1989) with reference to the way in which the medical profession, in focusing attention for ill-health on the individual, has deflected attention from wider economic, political, and social factors. Kirk (1988) also used the term in referring to the 'medicalisation of PE', the way in which HBPE has permitted the re-entry of the medical profession and has endorsed the involvement of the exercise scientist in PE.

Kirk (1988) expressed his concern about the potential for a 'lopsided relationship where scientific medicine has the final say' and the teacher is merely a 'technician' who follows directions (p. 123). Another related trend considered to influence the 'health' movement in PE was 'economic rationalism' in which economic considerations were seen to underpin the emphasis on increased prevention in health care, the belief being that if the health of the individual body improves, the health of the social body and economics improves (Colquhoun, 1989).

Kirk (1988) and McNamee (1988) identified 'functionalism' as a further influencing trend on the HRPE movement. Kirk (1988) used the term the 'new functionalism' to represent an emphasis only on those activities that directly contribute to fitness development. This he believes leads to an instrumental view of PE and plays down the valuable educational experiences that pupils may gain from doing something physical. McNamee (1988) added to these concerns suggesting that the implicit justification for HRF is an extrinsic or instrumental one, that is health and physical activity are valued only in so far as they are efficient means to an end. McNamee's (1988) view was that this devalues PE as it is not seen as having any intrinsic value, and he expressed concerns that PE might end up as daily exercise topped up with knowledge delivered by specialists in other disciplines.

A related influencing trend was considered to be 'technocratic rationality' which refers to a dependence on rational curriculum planning using an objectives model, a reliance upon quantitative research and the scientific method, and an apolitical view of the teaching process (Colquhoun, 1989). In Colquhoun's view (1989), the effects on PE were an emphasis on the quantification of performance and on teaching activities where performance is easier to measure, in addition to marginalisation and possible omission of qualitative, subjective and humanistic experiences (such as dance, outdoor education and non-competitive activities). Indeed, Evans and Davies (1986) had previously expressed concerns about traditional PE's tendency to focus on functional aspects of the body and to emphasise the 'measurable, the observable and the quantifiable' (p. 12). With respect to HRF, Colquhoun (1989) pointed to the heavy reliance on medical discourse and on scientific method and the way in which teachers were presented with unproblematic issues of how to teach HRF whilst the 'why' was often ignored or marginalised. Furthermore, Colquhoun (1989) was critical of the lack of debate as to what counts as legitimate knowledge in HRF and the apparent acceptance of exercise physiology and sports science as its basis and the dismissal of philosophical and humanistic aspects of physical activity as critical sites for discourse. Evans (1990) has similarly questioned the dominance of physiological and psychological issues within the HRF literature.

This dominance has more recently been criticised by Wortley (1994) in an assessment of the HRE aims and objectives interwoven throughout the NC:

The focus within HRE objectives places the notion of health **firmly** within the domain of physiological functioning, particularly cardio-pulmonary efficiency. The selection and isolation of some aspects of knowledge and practice as being health-related might be considered as undervaluing the health-related contribution of other aspects, particularly personal and social development and the enhancement of self-esteem. The holistic view of the person and the total response to exercise is ignored. The physiological emphasis alone is an oversimplistic approach to the multi-dimensional concept of health (pp. 110-111, original emphasis).

Wortley (1994) considers that the enormity of the problem of changing individual health behaviour is not acknowledged and that the reality of many people rejecting activity because they neither enjoy nor value it is neatly sidestepped (p.111). She also states that, in terms of pursuing physically active lifestyles, contributory factors such as home and family background, peer group pressure and social circumstances are downplayed within the NC and that passing references to the factors that influence behaviour imply that they are of little significance or easily tackled (ibid, 1994).

2.6.3 Conceptual Matters

As part of the professional debate on the 'health movement' in PE, a number of critical issues have been identified relating to conceptual matters. As far back as 1983, Almond had made the claim that the PE profession lacked a coherent rationale for HRF and that there was a 'mismatch between practices in schools and aspirations' (1983a, p. 5). As a consequence, in Almond's view, PE could be considered largely ineffective in terms of combating health-related problems associated with increasingly sedentary and affluent lifestyles. Several years later, Almond with Dowling (1987) stated that, in establishing a case for health and fitness within PE, there was a need to be aware of a number of conceptual issues that were still far from clear such as the potentially different effects of exercise on health and on fitness. Kirk (1988) and McNamee (1988) also posed critical questions as to the nature of HRF and the relationships between PE, health and fitness. McNamee (1988) considered that the HRF movement represented a paradigm shift and should be viewed with caution. He claimed that 'it doesn't follow that PE should have to take on health' and warned that HRF might 'be the death of PE' (ibid, 1988, p. 84). Indeed, McNamee (1988) referred to it as a 'naturalistic fallacy' that PE should consider itself responsible for low activity

and fitness levels and suggested that this may be the responsibility of others such as the medical profession. Williams (1978) similarly debated the connection between PE and HE, and questioned whether PE teachers possessed the kinds of knowledge (propositional, procedural, and interpersonal) which would qualify them to be teachers of HE.

Colquhoun also referred to the problematic relationship between health and PE and the lack of clarity with respect to what HRF represents (1989). Both McNamee (1988) and Colquhoun (1989) considered the confusion to be compounded by the fact that what was presented as HRF varied not only amongst HRF advocates in England but also differed from those in America. Colquhoun (1989) also cited a study by Hodgson (1988) in which some teachers had decided not to teach HRF because they thought it was mainly classroom-based, despite Almond's (1983a) suggestion that it was 'experiential' and therefore largely practical. Writing in 1989, Biddle stated that although individual teachers were taking on new ideas and practices, the profession as a whole had still not responded with cohesion or clarity to HRF.

McNamee and Almond (1991) have provided a conceptual analysis of the development of HRPE which focuses attention on the changing rationales, foci, motives, inspirations and terminology for the area during the 1980s (Table 2.10). Although HRE was the term ultimately adopted within the NC for the area of work associated with health and fitness, numerous other terms for this area have been used such as health-related fitness (HRF), health-related physical fitness (HRPF), health-related physical activity (HRPA), health-related physical education (HRPE), health-based physical education (HBPE), health-focused physical education (HFPE) and a health focus in PE. McNamee and Almond's (1991) analysis would suggest that the different terminology reflects the disciplines influencing the place of health within PE during key phases of its development. In an attempt to clarify the situation for teachers, it was explained that 'the reason for the various terms stems from a natural evolutionary process in terms of finding an appropriate term for a developing area of work' (Harris, 1991, p. 14).

	Phase 1: 1983	Phase 2: 1986	Phase 3: 1988
Rationale	Prevention of heart disease	Enhanced functioning of body systems	Personal well-being
Focus	Introduce new courses on fitness	Make exercise a positive experience	Sound rationale for the promotion of HRE
Motive	Put exercise on the PE agenda	An alternative to competitive sport	Change the PE pedagogy
Inspiration	Physiology	Psychology	Philosophy
Terminology	HRF	A health focus in PE	HRE

Table 2.10 Conceptual Analysis of the Development of HRPE (adapted from McNamee & Almond, 1991)

Colquhoun's (1989) concern that the dominating justification of HRF seemed to be a reduction in CHD has also been expressed by McNab (1992) whose view is that curricular PE is not and has not claimed to be a major factor in preventing CHD (p. 10). In discussing what he terms the 'games=fitness=health' issue, McNab (1992) states that games do little to develop fitness unless they are played vigorously and regularly, and after-school sport is a 'non-starter' in terms of CHD prevention as it only involves a small fraction of the school population. In addition, many of the physical activities promoted in PE are not lifelong pastimes and do not necessarily lead to adult fitness activity involving health benefits (ibid, 1992). His view is that if PE wishes to promote activity which has CHD benefit, then activities such as walking, jogging, swimming and racket games should be included. However, McNab (1992) believes that PE is not trying to do this. In his opinion, PE is about the enjoyment and understanding of physical activity and, through HRF, the provision of a body of knowledge enabling children to make informed choices about their lifestyles (ibid, 1992).

A related conceptual issue focused on the relationship between 'health' and 'sport' and the way in which the development of a health focus might impinge upon other areas of the PE curriculum, in particular on traditional games (Burton, 1987; Dowling, 1986). Furthermore, the PE profession had been asked by Almond (with Dowling, 1987) to identify what was being accomplished from the existing programme, and Sparkes (1985) issued a warning that undue emphasis on the competitive element in

PE had dangers for HRF programmes. With reference to the apparent tension between health and sport, BAALPE (1988) commented that HFPE 'does not...deny that quality and excellence of performance are laudable aims in school PE programmes' (p. 7). However, BAALPE (1988) went on to state that 'although it can be argued that health concerns underpin all aspects of the PE programme, it would be undesirable for a health-focus perpetually to dominate all aspects of provision (p. 7).

Similar issues relating to what HRE represents have arisen more recently with one OFSTED inspector stating his view of HRE as involving children in physically demanding, vigorous activity (Oxley, 1994). He was also critical of situations in which activities such as cross-country and circuit training are listed in schemes of work without reference to the statutory requirements (ibid, 1994). Oxley's (1994) interpretation of HRE has been challenged by HRE advocates who have pointed out that 'the objective is not to force children to be fit in limited periods of time, but to provide them with the understanding, competence and confidence to want to be active both at school and in their own time, now and in the future' (Harris & Almond, 1994, pp. 66-67). They also stated that HRE is not represented by 'activity without learning' which they agreed has no place in the PE curriculum (ibid, 1994, pp. 66-67).

2.6.4 Associated Issues

Pedagogical issues have arisen from the conceptual confusion surrounding HRE. One such issue relates to the way in which the teaching of health-related issues is organised within the PE curriculum. Indeed, in the early 1980s, the editors of a text on HE in schools stated that 'PE should always have contributed to HE but in some school settings such contributions have been very limited compared with physical activities, and at times have been limited to spasmodic wet day sessions' (Cowley, David, & Williams, 1981, p. 134). Within this same text, Wright (1981) outlined a broad view of PE's contribution to health and stated that it was 'necessary for particular blocks of work to be tackled which 'home in' on physical fitness, physique, and figure control per se' (p. 167). Six years later the comment was made that surveys of PE curricula revealed little evidence of a direct concern for health and fitness and it was suggested that '...teachers saw fitness as their main concern but it was a spin-off from the normal programme...' (Almond with Dowling, 1987, p. 141). Indeed, despite BAALPE's (1988) strong support for a focus on HBPE, it acknowledged the concerns and issues raised by the implementation of such work and referred to 'confusion' about the different views of traditionalists and progressives with respect to an 'implicit versus explicit' approach to HBPE (p. 1).

The issue of a 'permeated, integrated or embedded' approach versus a 'modular, focused, distinct, discrete or separate' approach to HRE has been ongoing for some time as evidenced by references to this issue in pre-ERA publications (Lancashire County Council Education Committee, 1984; Staffordshire LEA, 1989), in the FR (DES & WO, 1991b, p. 62) and in responses to the IR (HPEP, 1991b), the FR (Fox, 1992; Harris et al., 1991; NCC, 1991), the revised draft proposals (BAALPE, 1994) and the final orders (PEA, 1995). In addition, the permeation model was commented on by Professor Talbot, a member of the NCPE WG, who saw the advantage of the model being that 'the issues concerned become everyone's responsibility' which 'helps towards a common purpose and consensus' and the disadvantages being that it is 'politically weaker' with the 'possibility that no-one thinks it's their responsibility' (Talbot cited in Mannseur, 1992, p. 63). She added that people 'need to be well-trained and talented to ensure that the concepts are permeated. They can 'get lost' due to more over-riding aims' (ibid, 1992, p. 63). In view of claims from the 'health lobby' that the permeation model had not worked in the past (see 2.4.2 and 2.4.3), Professor Talbot stated that there were many examples of 'bad' practice, but stressed the need to focus on 'good' practice rather than 'normal' practice (ibid, 1992, pp. 62-4). The HEA have also commented on the approach to teaching HRE, stating that '...an exclusively modular approach to HRE is inconsistent and will be confusing to teachers' and that 'the HEA's position will be to advocate programmes containing continuity and progression through a permeation model' (HEA Education Officer, personal communication, May 5, 1992).

The issue has arisen again more recently with the publication in a professional journal of an OFSTED inspector's view of HRE in which it was stated that teaching HRE as a separate unit is 'contrary to the statutory requirements' and 'unnecessary' at KS one to three (Oxley, 1994, p. 39). This statement was challenged by HRE advocates who pointed out that the 'NC specifies content, not delivery' and that 'it is entirely fitting that specialists within a profession should determine the most effective method by which to deliver the statutory content' (Harris & Almond, 1994, p. 65). Similar debates have taken place with respect to HE in schools which may be organised as a specific subject course or as a cross-curricular activity. Williams (1981) has suggested that these should not be viewed as alternative ways of organising a programme because the second usually grows out of the first, although such growth has to be nurtured and is notoriously difficult. In response to the wish expressed in the NC for HE not to be viewed as a separate subject area (NCC, 1990), Donaghue (1991) feels that in order for this not to be seen as a way of 'losing' HE, a variety of supporting documents are necessary to show teachers in other curriculum areas how they might incorporate and deliver HE concerns (p. 88).

Another pedagogical issue which has arisen relates to the place of fitness testing in PE programmes. Many 'health and fitness' courses in schools emphasised fitness testing as a principal component of course content (Almond with Dowling, 1987) as did many of the HRPE texts and resources which became available to teachers during the late 1980s and early 1990s (Brodie, 1988, 1990; Derbyshire County Council, 1987). At this time and since then, many concerns have been expressed over the purpose, content and delivery of fitness testing in schools (Armstrong, 1987; Armstrong & Biddle, 1992; Biddle & Biddle, 1989; Biddle & Fox, 1987; National Association for Sport and Physical Education (NASPE), 1992; Rowland, 1995). For example, Armstrong has contested the value of fitness testing in schools and challenged the claim that children's fitness levels are deteriorating (Armstrong, 1989a, 1989b, 1990, 1991). His view is that fitness tests 'simply determine the obvious, at best only distinguishing the mature child from the immature child' (Armstrong, 1990, p. 12). With respect to the relationship between fitness, health and activity, Fox (1991) makes the point that, for children, the link between activity levels and health status appears to be stronger than that between fitness and health. In an attempt to clarify the situation for physical educators, position statements were issued in the UK and in America (ACSM, 1988; PEA, 1988) recommending that fitness testing within PE programmes focus on health-related rather than skill-related aspects, emphasise personal involvement and improvement (not social comparison), stimulate interest in learning about the effects of exercise, increase understanding of health-related concepts, and encourage positive attitudes and a lifetime commitment to activity. In addition, BAALPE (1988) were keen to point out that HFPE extends beyond the physiological to incorporate social and attitudinal parameters and that '...physical fitness and its assessment have to be seen as representing but one component of the overall programme designed to heighten pupil health-awareness. It cannot be emphasised too strongly that HFPE goes beyond physiological testing and measurement' (p. 7). BAALPE (1988) also recommended that students undergoing ITT should be introduced to a health-related curriculum and should be made aware that 'health-based physical education is not merely confined to fitness testing' (p. 8).

2.6.5 HRF as an Innovation

In addition to debates about the 'why', 'what' and 'how' of HRPE, other issues relating to HRF as an innovation were identified such as those relating to indicators of success and teaching methodology, and to what extent HRF represented a curriculum innovation. One such issue was the 'problem of aspirations' in HRF in the sense of how to measure achievement and effectiveness when it relates to outcomes such as current and future attitudes and behaviours (Kirk, 1986). Particularly problematic is

the 'futuristic perspective' of HRF, that is the effect on student attitudes and behaviours outside of school and post-school, the monitoring of which is considered to be difficult, if not impossible (ibid, 1986). This difficulty is compounded by the ambiguity of aspirations in HRF as there is no clear statement of what student behaviour would be appropriate evidence of teacher effectiveness regarding positive attitudes to health and fitness (ibid, 1986). Kirk (1986) commented that without evidence of success, the case for HRF is based on claims as to what is and is not good for pupils, and on teachers' decisions as to what health-related matters to teach on the basis of such claims and the apparent needs of pupils.

As the criteria for successful teaching was seen to change with the introduction of HRF, recognition and reward within an innovative situation proved to be a further pedagogical issue (ibid, 1986). With respect to establishing criteria for success by which teachers' effectiveness could be judged and recognised, Kirk (1986) considered that HRF 'pulled against' traditional and public criteria in terms of both the wider education system with its key feature of public exams and the conventional orientation to teaching PE. Kirk (1986) called for a rationale for HRF which reflected the criteria for effective teaching in order to avoid teachers being judged according to inappropriate standards. A solution for some teachers was found in writing articles and making presentations. With respect to 'tailoring means to suit new ends' such as the change in criteria for successful teaching, and the difficulty for teachers in gaining rewards, it was considered that teachers fell back on interaction with students as the main measure of success (ibid, 1986). However, in Kirk's (1986) view, the marginality of PE as a subject in schools may have worked in its favour in that it permitted the development of alternative norms and criteria for success which possibly would not have occurred in other subject areas.

A further pedagogical issue identified by Kirk (1986) was that traditional methods of learning were largely inappropriate and teachers were required to deal with new concepts, information and skills which demanded different ways of structuring learning experiences, all of which were potentially stressful. New teaching approaches and methods were needed such as shifting from the group as the basic teaching unit to the individual, and managing discussion work. McNamee (1988) also recognised that, in terms of content and methodology, HRF represented a fundamental shift from traditional PE in that there was a move away from procedural knowledge (how to perform) towards propositional knowledge (knowledge of truths). BAALPE's (1988) view was that any new innovation implies '...a re-examination of objectives and content, as well as a re-appraisal of teaching styles' (p. 1). INSET provision was considered necessary to re-appraise practising teachers in terms of appropriate content

and resources, alternative teaching styles with an emphasis upon process, and strategies associated with team-building and cross-curricular work (ibid, 1988). However, BAALPE (1988) considered that there was a place for both child-centred and didactic methodology in the teaching of HFPE.

A survey by the HPEP stated that teachers wanted support in the form of resources and courses to update their knowledge base on fitness and health issues (particularly relating to testing and correct exercises) and help in planning courses to fit into the usual PE programme (Almond with Dowling, 1987, p. 142). Almond with Dowling (1987) talked of resource materials as 'important crutches' for teachers but ones which should challenge them to try out new ideas and learn from the experience. However, the point was made that the likely outcome of a mismatch between the rationale underlying the resource provision and the teachers' value structures and perceptions of what a health focus is, would be the translation of a different message under the guise of a common framework (ibid, 1987, p. 146). Indeed, in their view, the 'training of trainers' approach to innovation involves the successful translation of a message down the line and this requires the support of PE advisers (ibid, 1987). With reference to issues raised by Pain (1986) about the range of teaching strategies required for health-education initiatives, and Spackman's evidence (1986) that PE teachers tend towards prescriptive approaches to learning, Almond with Dowling (1987) considered the demands on teachers in making major adjustments to both their perceptions of PE and their approach to learning which might also have repercussions on pupils who are used to a particular way of working in PE. The authors considered reflection and examination of current practice to be important first steps in recognising the need for change, in becoming receptive to alternative interpretations of the PE curriculum, and in being prepared to explore alternatives (Almond with Dowling, 1987).

With regard to HBPE as an innovation, Kirk (1988) described its distinctive features to be changes in the criteria, reward and methodology associated with successful teaching. Evans and Clarke (1988) noted that innovations in PE such as HRF and 'games for understanding' had received 'severe' criticism and were being blamed for the 'lamentable demise' of competition in secondary school PE (p. 128). They added that, although HRF stressed principles such as equity, a child-centred approach, independence, flexibility and co-operation, there were, nonetheless, official limits of the discourse. For example, it does not totally reject competition, its claim to be child-centred is 'nothing new' (since educational gymnastics and dance also claim this), and issues of class, gender, ethnicity and ability rarely enter explicitly into the 'official discourse' of HRF (ibid, 1988).

In 1989, Sparkes stated that the HRF movement was a clear example of 'innovation without change' in that it had achieved 'surface change' with respect to the use of new and revised materials and activities but had fallen short of 'real change' in terms of changes in beliefs, values, and ideologies. Evans (1985) had previously described curriculum change as superficial if it leaves the 'deeper structure of intention, assumption and consequently outcome of actions largely ignored' (p. 9), and later with Clarke (1988) stated that HRF had not achieved any significant shift in the balance of power between the teacher and the taught. Biddle (1989) added that 'real change' was unlikely if the advocates of HRF were suggesting a focus on health through traditional activities only (such as gymnastics and games) since, in his view, this did not challenge underlying ideologies or curriculum philosophy. Colquhoun (1989) disagreed that HRF represented 'innovation without change', claiming that this was misleading and unrepresentative of actual practice in schools in which teachers had taken on the 'burden of incompetence' and been involved in 'deskilling' and 'reskilling', the latter being common features of the innovation process (Apple, 1982). Not only did Colquhoun (1989) consider that teachers' perceptions of HRF had not been taken into account but he also questioned whether it was realistic to expect HRF to effect real change on its own. In his view, 'more large scale innovations or changes would be needed to dent the dominating ideology of individualism' (ibid, 1989, p. 118).

2.7 Summary

This review has examined the relationship between PE and health from the early 1900s onwards and documented the emergence and development of HRPE pre-ERA and through the developmental phases of the NCPE and its revision. Relevant health-related research and resources have been incorporated within the review, including consideration of the effects of formally-evaluated school-based HRPE programmes. Finally, the review examined the ideologies, trends and issues associated with health-related issues in PE. The review clearly indicates that the PE-health relationship and the place and expression of HRE in the NC and NCPE is a fruitful area for further investigation.

Chapter 3: Survey Method

3.1 Introduction

The purpose of this Chapter is to justify and describe the survey method employed within the overall methodology, the latter being defined as 'an articulated, theoretically informed approach to the production of data' (Ellen, 1984). The Chapter is presented in five main sections: (1) survey procedures, (2) pilot 1: local survey, (3) pilot 2: national survey, (4) main survey, and (5) survey costs.

As stated in the introduction to this thesis, the aim of the research was to explore and describe the way in which HRE was being viewed, approached and delivered in secondary schools in England. The specific objectives were to explore and document the views, approaches and practices relating to HRE within the NCPE and to identify factors which may influence the approach to and provision of HRE in secondary schools in England. In order to achieve these objectives the research design involved the integration of qualitative and quantitative methods.

The initial phase of the research design focused on identification of the issues to explore within the research process. An initial research problem lay in clarifying the concept to be studied, that of HRE. A concept is a term created for the purposes of communication and efficiency, and represents an abstract summary of a whole set of behaviours, attitudes and characteristics which are seen to have something in common (de Vaus, 1993). Documentary research together with exploratory participant observation and informal interviews indicated that the concept of HRE has different meanings for people and comprises a number of aspects and dimensions relating to philosophy, knowledge and understanding, physical/motor and behavioural skills, practical experiences, attitudes and behaviours. Thus, a range of indicators was required within the research design to represent the concept of HRE. Although it was essential that the process of concept clarification commenced before data collection, it was viewed as ongoing throughout the research. Indeed, following data analysis, the intention was to be in a better position to say what was meant and understood by the concept of HRE.

It was critical in conducting the research that the indicators measured the concept in question and did so in a consistent manner. It was thus important to assess the validity and reliability of the indicators by means of thorough pilot testing. This led to the second phase of the research design which involved two pilot surveys which were followed by a national survey of PE HoDs in secondary schools to explore their

views, approaches and practices relating to HRE within the NCPE. Questionnaire data informed the design and focus of the third and final stage of the research which involved case studies in a small number of selected secondary schools. The case study methodology is reported in Chapter 5.

Similar research methods were adopted by the NCC (1991b) in their monitoring of the implementation of the NC core subjects 1989-90. The NCC (1991b) stated that a combination of questionnaire survey and case study methods provided the breadth of sample and depth of enquiry needed to fulfil the study's aim of identifying and examining issues which would inform the design and content of future monitoring and evaluation programmes.

A multi-method, in contrast to a single-method, approach to a problem is referred to as triangulation (Cohen & Manion, 1994). Triangulation was adopted within this research design in order to minimise bias or distortion through 'method-boundness' and to avoid presenting a limited view of the complexity of human behaviour. Furthermore, no research paradigm is considered to have a monopoly on quality, each research method providing a different glimpse of reality and all being limited when used alone (Peshkin, 1993). Thus, a combined methods approach was adopted with the intention of integrating objective and subjective approaches, disclosing contrasting perspectives, and breaking down the traditional barriers between normative and interpretive approaches.

A timetable of the survey research is presented in Table 3.1 to illustrate that this phase of the study was continuous and ongoing despite the fact that, as part-time research, it spanned a period of four years (1991-94).

Dates	Research Processes and Procedures
1991-1992	Study of relevant literature and documentation. Identification and clarification of issues.
March - October 1992	Formulation of questionnaire. Identification of questionnaire sample.
November - December 1992	Pilot 1 questionnaire administered 11/92.
January 1993	Pilot 1 evaluation and data analysis. Amendment of questionnaire design.
February - April 1993	Pilot 2 questionnaire administered 2/93. Follow-up questionnaire administered 4/93.
May - July 1993	Pilot 2 evaluation and data analysis. Reporting of Pilot 2 findings.
May 1993	Initial intention to distribute main survey questionnaire was postponed to September 1993.
September - December 1993	Main survey questionnaire administered 9/93. Follow-up questionnaire administered 11/93.
February - December 1994	Main Survey questionnaire data analysis. Reporting of main survey findings.

Table 3.1 Survey Research Timetable

3.2 Section 1: Survey Procedures

3.2.1 Selection and Justification

Survey research is characterised by a structured or systematic set of data, the analysis of which is based on a comparison of cases (de Vaus, 1993; Marsh, 1982). Collecting data through postal questionnaires is considered to be an appropriate method by which to determine the current views and practices of a specified population (Cohen & Manion, 1994; de Vaus, 1993). Thus, in order to establish baseline data on how HRE was being viewed and implemented within the NC, and specifically within the NCPE, survey methods were adopted and information was obtained through questionnaires completed by PE HoDs from a sample of secondary schools in England. The survey specifically aimed to provide data that would describe the provision of HRE in schools in terms of both quantity and quality, explore the variation in this provision between schools, and address possible factors influencing such variations (such as the type, gender, size and geographical location of the school, and the gender and teaching experience of the PE HoD).

Questionnaire design initially involved establishing clearly defined objectives for the survey including specification of the variables to be analysed. These objectives were to explore the views, approaches and practices relating to HRE within the NCPE. Questions were included about attitudes, behaviour and attributes. The inclusion of each question followed consideration of the specific objective that it was exploring and how the response was to be analysed. Thus, contextual data such as the type, gender mix and size of the school were included in order to permit comparison of information about HRE from a variety of secondary schools. Similarly, information was collected on the profiles of the PE HoDs such as gender and teaching experience as it was considered possible that these factors might have a bearing on the approach to HRE.

The questionnaire was designed to include predominantly closed questions as these are less time-consuming for respondents, provide more control over the nature of the response, and are less complex to synthesise and analyse than open-ended questions. Additional reasons for adopting predominantly closed questions were that the questionnaire was particularly lengthy, and knowledge, experience and observation confirmed that PE teachers are generally busy individuals. Furthermore, there was the intention to follow up the questionnaire with case studies. In order to minimise any bias, it was recognised that the formulation of closed questions required developing a comprehensive range of alternative responses. In the early stages of questionnaire design, open-ended questions were used to help to locate the range of likely responses. Open-ended questions were presented to professional colleagues, to teachers on INSET courses and in local schools, and to colleagues and friends who were teaching in secondary schools in different areas of England. The closed questions were constructed by categorising the open-ended question responses. One open-ended question was included at the end of the questionnaire in order to ascertain PE HoDs' views on the suggestion at the time to 'slim' each subject within the NC (Dearing, 1993). An open-ended, rather than closed, question was considered more appropriate as time pressures prevented further exploration of the issue and it was not possible to speculate in an informed manner on the nature of the responses. However, its inclusion was considered to be relevant in that the responses may have impacted on health issues within the NC and NCPE.

In determining the questionnaire items, short rather than long questions were used as they are easier to understand, clear instructions as to the form of the response were given, and easier questions were placed at the beginning of the questionnaire. This follows the guidance provided by Selltitz, Wrightsman and Cook (1976) and de Vaus

(1993) on how best to achieve clarity and the same meaning for everyone. Items were avoided that used technical language or jargon, had two or more separate ideas in the same question, included negative items, or that led the respondent to answer in a certain way (de Vaus, 1993). Close attention was paid to the design, appearance and presentation of the questionnaire, and to that of the covering and follow-up letters. The letters were concise and succinct and provided assurance of confidentiality (Appendix A). A specific dilemma in the design of the questionnaire and accompanying letters was the extent to which the author should be explicit about the health-related focus of the research (see Chapter 7, Section 8, 7.9 for further discussion of the ethical issues addressed within the research process). It was decided to 'play down' this emphasis in order to minimise respondents' possible bias either towards or away from the subject focus and to minimise recognition of the author's name and association with the area. The timing of the mailings was carefully considered in order to avoid school holiday times and particularly busy times of the school year.

A number of pilot studies were undertaken in order to obtain valuable critiques relating to the questionnaire format, content, expression and importance of items, and whether questions should be added or deleted. It was considered important that the final pilot study involved a sample that closely represented the main survey sample and involved a trial run of the analysis of the results to confirm that the data could be analysed in a meaningful way.

In exploring the programme content of curricular PE, the activity areas and cross-curricular themes used in the NCPE text (DES & WO, 1992) were adopted. One modification in this respect was the inclusion of health-related exercise (HRE) or health-related fitness (HRF) as a discrete component within PE. Documentary evidence, pre-pilot discussions and personal awareness indicated that HRE/HRF was a discrete module in curricular programmes in many schools (Booth, 1986; Matharu, 1987; SHA, 1990, 1994; Sharman, 1987). Although both curricular and extra-curricular PE were investigated, the emphasis was predominantly on the former.

3.2.2 Validity and Reliability

Issues relating to reliability and validity were considered throughout the questionnaire design process. Validity refers to the degree to which a test or instrument measures what it purports to measure. Validity is generally addressed by adopting a good existing criterion or well-accepted definition, or well-established theory using the concept. In the absence of these, as was the case in this research design, measures which at face-value seemed to cover the concept of HRE in a comprehensive and

balanced manner were reviewed and commented upon by a panel of judges (teachers, advisers, lecturers, researchers). The problematic issue of validity confirmed the need for triangulation by supplementing the questionnaire with more in-depth data collection techniques. According to Belson (1986), validity of postal questionnaires is reflected in whether the respondents completed the questionnaire accurately, and whether the non-respondents would have given the same distribution of responses as the returnees. The former was maximised by thorough piloting in order to assure the clarity and meaning of the questions. The latter involved employing techniques to reduce non-response and by follow-up telephone contact with a proportion of the non-respondents. This permitted some comparison between the replies of respondents and non-respondents. This issue is addressed in Chapter 4 (Section 7, 4.8).

Reliability refers to the consistency and dependability of a measure and was addressed through careful wording of questions and by requesting the same or similar information in different ways throughout the questionnaire. In addition, prior to the main survey, the questionnaire was completed by ten secondary school PE teachers twice within a three week period and the results revealed remarkable accuracy.

3.3 Section 2: Pilot 1 - Local Survey

3.3.1 Pilot 1 Questionnaire Design

A questionnaire was designed to access information about the curriculum content of school PE programmes and to ascertain PE teachers' views of the NCPE, and in particular, of the HRE requirements within the NC. Data relating to documentary research, participant observation and informal interviews informed the design of the questionnaire. During 1992 the questionnaire was distributed to and comments requested from colleagues within the Department of Physical Education, Sports Science and Recreation Management, the Department of Social Sciences, and Computing Services at Loughborough University, colleagues working within national organisations (such as the National Curriculum Council) and numerous professional colleagues and friends who were members of the PE inspectorate or who were teaching PE in secondary schools in England. Constructive comments on the questionnaire design and presentation were used to modify and improve the questionnaire prior to it being distributed to a local sample.

3.3.2 Pilot 1 Sample

The sample for Pilot 1 was a convenience sample comprising the PE HoDs within the forty secondary schools associated with the Post-Graduate Certificate of Education (PGCE) course at Loughborough University. The schools were based in the East

Midlands region of England, specifically in the counties of Leicestershire, Derbyshire, Staffordshire and Nottinghamshire. Non-probability sampling is considered acceptable where the intention is to pilot a survey questionnaire as a prelude to a main study (Cohen & Manion, 1994).

3.3.3 Pilot 1 Questionnaire Administration

The PGCE students on the PE main subject course were asked to co-operate in the research process by distributing a questionnaire to the PE HoD in their teaching practice school. A letter to the headteacher and one to the PE HoD (Appendix A) plus a questionnaire (Appendix B) were distributed by the PGCE students in their respective teaching practice schools on 16th November 1992. It was requested that the questionnaires be returned via the PGCE students by 1st December 1992. The use of verbal and written reminders to the students resulted in a final response rate of 50.0%. Some sections of the returned questionnaires were only partially completed. One PE HoD requested a summary of the results which was duly sent in February 1993.

3.3.4 Pilot 1 Questionnaire Data Analysis

The questionnaire was evaluated with respect to the overall response rate, response rate per question, and the degree of completion. Written and verbal responses from PE staff and PGCE students were recorded. Formal and informal feedback from teachers was generally positive in that they thought the questionnaire content was well considered and presented. However, some PE HoDs commented on the length of the questionnaire and the difficulty they had in finding time to complete sections of it, especially the more detailed curriculum information. The data were analysed using the Statistical Package for Social Scientists (SPSS) which is a general statistics programme including basic data description facilities and multivariate procedures (Bryman & Cramer, 1990; Norusis/SPSS Inc., 1990). However, with a response rate of fifty per cent and with much of the detailed curriculum information being incomplete, the decision was taken not to pursue the data analysis beyond descriptive statistics but to concentrate on reducing the length and complexity of the questionnaire and focusing the subject matter. A summary of the Pilot 1 results is presented in Appendix C.

3.4 Section 3: Pilot 2 - National Survey

3.4.1 Pilot 2 Questionnaire Design

Following Pilot 1, the questionnaire was revised. This involved the removal of surplus questions, the inclusion of more specific HRE questions, the addition of responses to closed questions, and clarification of the wording of some questions. The questionnaire was more sharply focused on aspects of HRE such as those relating to the method of implementation, content, delivery, and resourcing, and on views of the specific HRE requirements of the NCPE at KS three and four. Questions with non-response rates of ten per cent or more were either removed or amended.

Following this internal evaluation of Pilot 1, the revised questionnaire was sent to professional colleagues for comment. It was explained that the main differences from the Pilot 1 questionnaire were that the revised questionnaire was shorter and more concise, less time consuming to complete, more clearly presented, contained fewer questions open to mis-interpretation, and focused more explicitly on HRE. In particular, the following specific amendments had been made:

- (a) the detailed curriculum section for each year was removed as were some questions which were considered to be superfluous (eg. questions requesting details of capitation, examination pupil numbers, reports, and award schemes)
- (b) some questions were simplified (eg. regarding staffing and capitation) or clarified (eg. PE time for the older age groups; the organisation of HRE within the PE curriculum)
- (c) some questions were added in order to explore the concept of HRE in a more focused and comprehensive manner
- (d) additional categories were created where 'others' had been frequently completed (eg. 10-14 and 14-18 year age categories; additional HRE texts)
- (e) more space was provided for information regarding staff
- (f) the request for a name and address was removed and the issue of confidentiality was explicitly addressed in the covering letter.

Colleagues were asked to consider the following when reviewing the questionnaire:

- (1) Does each question seem relevant given the intention of the questionnaire?
- (2) Is each question easy to understand and interpret?
- (3) Is it clear as to how the response should be made for each question?
- (4) Are there any questions that are unnecessary or surplus to requirements?
- (5) Are there any questions missing?
- (6) Are there any ways in which the presentation could be improved?
- (7) Are there any ways in which the response rate could be improved?

Detailed written feedback from twenty professional colleagues in schools, higher education, local authority and other institutions (eight secondary school PE teachers, two PE advisers/inspectors, four PE higher education lecturers, three PE researchers working in higher education, two computer staff and one social science researcher) resulted in changes which further clarified questions, minimised mis-interpretation, and aided data preparation and analysis. In addition, some changes were made in order to match categories used by the DES (eg. type and size of school). Advice was also taken with respect to the design and content of the covering letters. For example, suggestions were made (a) to use brightly coloured paper for the questionnaire to ensure that it was distinct from the usual mail received in schools, (b) to print on both sides of the paper to make the questionnaire appear 'shorter', and (c) to use a freepost return system in order to improve the response rate. In addition, two short questions were added with respect to changes to PE time since the introduction of the NC, and the perceived adequacy of PE time to meet the requirements of the NCPE.

3.4.2 Pilot 2 Sample

It was considered imperative that the Pilot 2 sample represented the main survey sample and thus probability sampling techniques were employed. According to de Vaus (1993), between seventy-five and one hundred respondents is adequate for a pilot test. Thus, the sample for Pilot 2 comprised 100 schools considered to be representative of secondary schools in England (excluding designated special schools). In order to address the spectrum of school types and age groups, both state and independent schools, including mixed and single sex schools, were incorporated. A proportionate, stratified sampling procedure was adopted, the variables used to stratify the sample being: type of school (eg. state comprehensive, grant-maintained, independent); gender of pupils in school (eg. mixed sex, single sex girls, single sex boys); age range of school pupils (eg. 11-18, 14-18, 10-14 years); size of school according to number of pupils (eg. small, medium, large); geographical location within England (eg. South, Midlands, North; rural, urban); and the ethnic population within the school.

Information about secondary schools in England was requested from the Analytical Services Branch of the DES based in Darlington, County Durham. The information requested related to the number of schools which were: state-maintained secondary; middle schools deemed secondary; grant-maintained secondary; secondary independent (i.e. those independent schools teaching pupils aged over ten years); and city technology colleges (CTCs). Information was also requested about: the number of secondary schools teaching specific age ranges (eg. 11-18 years, 10-14 years) and genders (eg. mixed, all boys, all girls); the size of schools (according to pupil

numbers) for each category of secondary school; the number and percentage of secondary schools for each of the 109 LEAs in England; LEAs considered to have high percentages of 'rural' schools; and LEAs considered to have high percentages of ethnic populations.

Information was obtained from the DES by means of telephone calls, letters and faxes during January and February 1993 (Table 3.2). The statistics obtained were dated January 1991 which represented the most current data available. It was explained that data had not yet been processed from the January 1992 census.

Type of School	Totals (1/91)	Number from Sample of 100
State-Maintained Secondary (SMS)	3117	72
State-Maintained Middle Deemed Secondary (SMM)	491	11
Grant-Maintained Secondary (GMS)	289	7
All State Secondary Schools in England (SMS + SMM + GMS)	3897	90
Independent Secondary (teaching 10+ age range) (IS)	433	10
City Technology College (CTC)	7	0
All Secondary Schools in England (SMS + SMM + GMS + IS + CTC)	4337	100

Table 3.2 Pilot 2 Sampling Framework for Secondary Schools in England

Information about school sizes in terms of pupil numbers suggested that state schools could be placed into three categories: small (up to 600 pupils), medium (601-900 pupils) and large (more than 900 pupils). Of the 3897 state secondary schools, 968 (24.8%) could be categorised as small, 1408 as medium-sized (36.1%) and 1521 as large (39.0%). However, information from school directories (Education Authorities Directory and Annual 1992; Education Year Book, 1993) indicated that there were few large independent schools in comparison with state schools. Therefore, the decision was taken to amend the ratio for the independent sector and to select thirty per cent small, fifty per cent medium-sized and twenty per cent large independent schools.

With respect to information about urban and rural areas or schools, staff at the DES (London) explained that there was no simple classification of urban and rural areas or

schools. Advice was offered to select schools from the fourteen participating LEAs in 'The Rural Schools Curriculum Enhancement Project' (DES, 1991), these being: Berkshire, Cambridge, Cheshire, Cornwall, Cumbria, Devon, Dorset, Humberside, Norfolk, Northumberland, North Yorkshire, Shropshire, Staffordshire, and Wiltshire.

No information was available from the DES on ethnic populations. However, it was explained that the DES was currently involved in a Project (in its third year) in which they were attempting to collate information through LEAs on ethnic origins of pupils in schools but they had encountered many problems with low returns, inaccuracies, and sensitivities. The DES was not in a position to release any current information. The suggestion was to include the following areas in the study as they were known to have high percentages of ethnic populations (based on the level of finances provided for assistance with pupils for whom English is not their first language): Birmingham, Bradford, Hackney, Leeds, Leicester, Sandwell, Tower Hamlets, and Wolverhampton.

On the basis of the information available from the DES, it was possible to calculate the ratio of different types and sizes of secondary schools within each of the 109 LEAs in England. The Pilot 2 sample comprised 100 secondary schools in England, of which ninety were state-maintained (Table 3.3) and ten were independent (Table 3.4). Of the ninety state secondary schools: seventy-two were state-maintained, eleven middle deemed secondary, and seven grant-maintained; seventy-nine were mixed sex, five were boys' schools and six girls' schools; in terms of size, twenty-two were small, thirty-two medium-sized and thirty-five large; in terms of geographical representation, eleven schools were from the London LEAs, one from each of the fourteen 'more rural' LEAs, one from each of the eight 'higher ethnic population' LEAs, plus one from each of the remaining LEAs with up to two or three from the larger LEAs, these being: Birmingham, Bradford, Essex, Hampshire, Hertfordshire, Kent, Lancashire, Leeds, Leicestershire, Nottinghamshire, and Staffordshire.

LEA	School Type	School Gender	School Size	LEA	School Type	School Gender	School Size
Barnsley	SMS	mixed	small	Leicestershire	SMS	mixed	medium
Bedfordshire	SMM	mixed	medium	Leicestershire	SMS	mixed	medium
Berkshire	SMS	mixed	medium	Lincolnshire	GMS	mixed	medium
Birmingham	SMS	mixed	large	London:Barnet	SMS	mixed	large
Birmingham	SMS	mixed	medium	London:Brent	SMS	mixed	medium
Bolton	SMS	mixed	large	London: Camden	SMS	boys	medium
Bradford	SMM	mixed	medium	London: Croydon	SMS	mixed	medium
Bradford	SMM	mixed	small	London: Greenwich	SMS	mixed	large
Bucks	GMS	mixed	medium	London: Hackney	SMS	mixed	large
Bury	SMS	mixed	medium	London:Hammer-smith & Fulham	SMS	girls	medium
Calderdale	SMS	mixed	small	London: Lambeth	SMS	mixed	small
Cambridgeshire	SMS	mixed	small	London: Lewisham	SMS	girls	large
Cheshire	SMS	mixed	large	London: Southwark	SMS	mixed	large
Cleveland	SMS	mixed	small	London: Tower Hamlets	SMS	mixed	medium
Cornwall	SMS	mixed	medium	Manchester	SMS	mixed	large
Coventry	SMS	mixed	large	Norfolk	SMS	mixed	small
Cumbria	SMS	mixed	small	Northants	SMM	mixed	small
Derbyshire	SMS	mixed	medium	Northumberland	SMS	mixed	small
Doncaster	SMM	mixed	small	North Tyneside	SMM	mixed	small
Dorset	SMS	mixed	medium	Nottinghamshire	SMS	mixed	medium
Dudley	SMS	mixed	small	Oldham	SMS	mixed	large
Durham	SMS	mixed	medium	Oxfordshire	SMS	boys	medium
East Sussex	SMS	mixed	medium	Rotherham	SMS	mixed	large
Essex	SMS	boys	medium	Salford	SMS	mixed	small
Essex	GMS	mixed	large	Sandwell	SMS	mixed	medium
Essex	SMS	mixed	large	Sefton	SMS	mixed	small
Essex	SMS	mixed	medium	Sheffield	SMS	mixed	large
Gateshead	SMS	mixed	medium	Shropshire	SMS	mixed	medium
Gloucestershire	SMS	girls	medium	Somerset	SMS	mixed	medium
Hampshire	SMS	mixed	large	St Helens	SMS	mixed	medium
Hampshire	SMS	mixed	large	Staffordshire	SMS	mixed	medium
Hereford & Worcester	SMM	mixed	small	Staffordshire	SMS	mixed	large
Hertfordshire	GMS	boys	large	Stockport	SMS	mixed	large
Hertfordshire	SMS	mixed	medium	Suffolk	SMM	mixed	small
Humberside	SMS	mixed	large	Sunderland	SMS	mixed	large
Isle of Wight	SMM	mixed	small	Tameside	GMS	mixed	medium
Kent	SMS	mixed	large	Trafford	SMS	girls	large
Kent	SMS	mixed	medium	Wakefield	SMS	mixed	small
Kirklees	SMS	boys	large	Walsall	SMS	mixed	large
Lancashire	GMS	mixed	large	Warwickshire	GMS	mixed	medium
Lancashire	SMS	girls	large	West Sussex	SMS	mixed	large
Lancashire	SMS	mixed	large	Wigan	SMS	mixed	large
Lancashire	SMS	mixed	medium	Wiltshire	SMS	mixed	small
Leeds	SMS	mixed	large	Wirral	SMS	girls	medium
Leeds	SMM	mixed	small	Wolverhampton	SMS	mixed	large

Key: School Type: SMS: state-maintained secondary; SMM: state-maintained middle deemed secondary; GMS: grant-maintained secondary. School Size: Small: up to 600 pupils; Medium: 601-900 pupils; Large: more than 900 pupils.

Table 3.3 Pilot 2 Sampling Framework for State Secondary Schools

Of the ten independent schools: six were mixed sex, two were boys' schools and two girls' schools; in terms of size, four were small, five medium-sized and one large; in terms of geographical representation, schools were selected from the North East, North West, South East, South West, East Midlands, and the West Midlands of England.

LEA	School Gender	School Size	LEA	School Gender	School Size
Avon	mixed	medium	Nottinghamshire	mixed	small
Devon	boys	medium	Surrey	mixed	large
Hampshire	mixed	small	Tyne & Wear	girls	large
Kent	girls	medium	W. Yorkshire	boys	medium
Merseyside	mixed	medium	W. Midlands	mixed	small

Key: School Size: Small: up to 600 pupils; Medium: 601-900 pupils; Large: more than 900 pupils.

Table 3.4 Pilot 2 Sampling Framework for Independent Secondary Schools

Schools from Pilot 1 were not included as they had already contributed much time to the research. The schools were randomly selected from the sub-groups developed from the sampling frameworks (Tables 3.3 and 3.4) and the precise school names, addresses and allocated questionnaire numbers were recorded for follow-up purposes.

3.4.3 Pilot 2 Questionnaire Administration

One hundred questionnaires (on pink coloured paper) (Appendix D) plus accompanying letters (on white paper) to the headteacher and to the PE HoD (Appendix A) were posted on 26th February 1993. Each letter included an addressed freepost envelope in order to encourage a higher response rate. The questionnaires were anonymous (although were coded for follow-up purposes). The return date was set for 1st April 1993 which allowed just over four weeks for completion. By the official return date, fifty-eight questionnaires had been returned (58.0%). Of these, fifty-four were completed and four were returned blank. Reasons for non-completion were lack of time and pressure of work. A follow-up letter (on white paper) (Appendix A) and a second copy of the questionnaire (on green coloured paper) were sent directly to the PE HoD on 17th April 1993 to be returned by 1st May 1993. The second mailing to the non-respondents led to a total response rate of 76.0%. This response rate was considered acceptable as well conducted mail surveys are reported

to have typical response rates of between sixty and seventy-five per cent (de Vaus, 1993). The response rate was seen as reflecting the rigorous follow-up procedures and perhaps the strength of feeling amongst PE teachers at the time of the study about issues relating to the NCPE. PE HoDs from five schools requested a summary of the research findings and these were duly sent in July 1993.

3.4.4 Pilot 2 Questionnaire Data Analysis

The responses were edited in order to identify and eliminate errors made by respondents. As each questionnaire was returned, it was checked individually by the author for completeness, accuracy and uniformity. For example, it was possible for the author to double check the calculations for total teaching time in a week and the percentage of PE time per year group. Checked questionnaires were taken to the data preparation section of Computing Services at Loughborough University to be processed during April 1993. As for Pilot 1, the data were analysed using the Statistical Package for Social Scientists (SPSS). Descriptive statistics and some correlational data were obtained. A summary of the Pilot 2 results is presented in Appendix E. Follow-up telephone contact was pursued with a proportion of the non-respondents (10.0%). This permitted some comparison between the replies of respondents and non-respondents. This issue is addressed in Chapter 4 (Section 7, 4.8).

3.5 Section 4: Main Survey

3.5.1 Main Survey Questionnaire Design

Analysis of the responses to the Pilot 2 questionnaires indicated a need to focus the content more towards HRE and to address some issues with a small number of questions. As a consequence, the following final amendments were made to the questionnaire: (a) more HRE-related questions were added, examples including questions relating to: liaison with health co-ordinators and with primary schools; the subject content, practical-theory balance, and timing of HRE lessons; the resources used to support these lessons; and, 'health-promoting school' criteria, (b) questions considered to be superfluous by this stage of the research were removed, examples including questions relating to: the faculty name; detailed information about all PE department members; specification of exam boards; and, comparison of extra-curricular time with other department members, (c) some questions were simplified, examples being those relating to facilities and capitation, (d) frequently-stated 'other' responses were added to the closed categories, examples being the addition of a second school hall and a second gymnasium to the list of indoor facilities, (e) some questions were amended due to comments made on the Pilot 2 questionnaires, an example being differing opinions on the adequacy of PE time to cover the NC

requirements at KS three and at KS four. Both additional and amended questions were commented upon by professional colleagues and piloted with secondary school PE teachers.

3.5.2 Main Survey Sample

From May 1993 onwards, information about secondary schools in England was again requested from the DES. The same sources of information as for Pilot 2 were used and information was obtained through telephone calls, letters and faxes between May and September 1993. The specific data requested from the DES included the number (total figures plus those for mixed, boys' only and girls' only schools) of: (a) state-maintained secondary schools (excluding grant-maintained and middle schools deemed secondary), (b) independent schools (teaching the ten year plus age range only), (c) the size of each type of school by gender (ie. mixed, boys' only, girls' only), (d) an updated list of grant-maintained schools and CTCs (previous list dated January 1993), (e) information about the total number of state-maintained secondary schools teaching specific age ranges, (f) data regarding the number of 'secondary' independent schools (teaching the ten year plus age range only) within each of the 109 LEAs in England (a breakdown was requested into mixed, boys' only, girls' only schools), (g) percentages of the different types of secondary school within each of the 109 LEAs in England. Table 3.5 details the information received from the DES.

Type of School	Totals (9/93)	Number from Sample of 1000
State-Maintained Secondary (SMS)	2807	657
Middle Deemed Secondary (M) (GMM: Grant-Maintained Middle Deemed Secondary)	486 (including 18 GMM)	114
Grant-Maintained Secondary (GMS)	499	117
All State Secondary Schools in England (SMS + M + GMS)	3792	888
Independent Secondary (teaching 10+ age range) (IS)	467	109
City Technology College (CTC)	15	3
All Secondary Schools in England (SMS + SMM + GMS + IS + CTC)	4274	1000

Table 3.5 Main Survey Sampling Framework for Secondary Schools in England

With the information provided, it was possible to select the secondary schools comprising the main survey sample. As before, schools from Pilot 1 and Pilot 2 were excluded as they had already contributed much time to the research. Although initially the DES claimed that it would not be possible to provide information about schools which were about to become grant-maintained from 1st September 1993, this information was received half-way through the sampling process resulting in a last minute re-adjustment of all the figures and questionnaire numbers.

The sample for the national survey comprised 1000 schools considered to be representative of secondary schools in England (excluding designated special schools). A proportionate, stratified sampling procedure was adopted, the variables used to stratify the sample being (a) type of school, (b) age range of school, (c) gender of pupils in school, (d) size of school according to pupil numbers, and (e) geographical location of the school within England. As it had not been possible to obtain sufficient information on 'urban' and 'rural' schools, or on the ethnic percentages of school populations, these variables were removed from those initially selected to stratify the sample.

The schools were randomly selected from the sub-groups developed within the sampling framework and the precise school names, addresses and allocated questionnaire numbers were recorded for follow-up purposes.

3.5.3 Main Survey Questionnaire Administration

Initially, the intention was to distribute the main survey questionnaires towards the end of May 1993. However, following consultation with my PhD supervisor, the decision was taken to delay the questionnaire distribution until September 1993. The reasons for the decision were two-fold. Firstly, it was considered that there was insufficient time between the second pilot study and the main survey to permit detailed analysis of the results and to reflect on the need for amendments to the questionnaire. Secondly, it had become evident through talking to numerous teachers (on INSET courses, on PGCE 'teaching practice' visits, colleagues and friends) that the way in which HRE was currently being approached in individual schools was not necessarily how it would be approached in the following year. Teachers claimed that having had more time to digest and discuss the NCPE documentation (DES & WO, 1992), their plans for the following academic year were likely to be different from the previous year. Given this, it seemed prudent to delay the main survey until the end of September 1993 and to focus the enquiry on the 1993/94 academic year.

One thousand questionnaires (on yellow coloured paper) (Appendix F) plus accompanying letters to the headteacher and to the PE HoD (on white paper) (Appendix A) were prepared and sent out on 24th September 1993. Secretarial assistance was used in this process. As before, each letter included an addressed freepost envelope in order to encourage a higher response rate, and the questionnaires were anonymous (although were coded for follow-up purposes). The return date was set for 1st November 1993 which allowed over five weeks for completion. By the official return date, 560 questionnaires had been returned (56.0%). Of these, 526 were completed (including four questionnaires with the number deleted or cut off) and thirty four were returned not completed. A follow up questionnaire (on blue coloured paper) plus a letter to the PE HoD (on white paper) (Appendix A) were sent out on 12th November 1993 with returns requested by 6th December 1993. The second mailing to the non-respondents led to a total response rate of 72.8%. As with Pilot 2, this response rate was considered methodologically acceptable (de Vaus, 1993) and was seen as reflecting the rigorous follow-up procedures and the strength of feeling of PE teachers at the time of the study about issues relating to the NCPE. Eight PE HoDs requested results of the research and published articles on the second pilot study and the main survey were sent to these individuals during 1995.

Communication was received from a number of PE HoDs to explain that unfortunately they were unable to co-operate due to school commitments and/or impending school inspections. Comments written on non-completed questionnaires referred to the number of questionnaires already received that term (one headteacher claimed to have received seventeen questionnaires, three relating to PE), the length of the questionnaire, and the workload and pressure within schools. One headteacher apologised for mis-filing the questionnaire. One letter received from a headteacher explained that school staff only completed statutory questionnaires and another explained that it was school policy to set a fee of twenty pounds for the completion of non-statutory questionnaires. In addition, communication was received to explain that one middle school was now a primary school, another had just merged with a second school, and a third had closed in July 1993.

3.5.4 Main Survey Questionnaire Data Analysis

As for Pilot 2, the responses were edited in order to identify and eliminate errors made by respondents and to check for completeness, accuracy and uniformity. The completed questionnaires were processed by the data preparation section of Computing Services at Loughborough University during January 1994. As for the pilot studies, the data were analysed using the Statistical Package for Social Scientists

(SPSS). Assistance with data analysis was obtained during 1994 from staff within the Department of Social Sciences, and Computing Services at Loughborough University.

A comparison was made between the initial sample of 1000 and the responding sample of 728 (Table 3.6). Follow-up telephone contact was pursued with a proportion of the non-respondents (10.0%) which permitted some comparison between the replies of respondents and non-respondents. Comparisons between the profile of the initial and responding samples and the returns of the respondents and non-respondents are addressed in Chapter 4 (Section 7, 4.8).

Type of School	% of Initial Sample of 1000	% of Responding Sample of 728
State-Maintained Secondary (SMS)	65.7	58.1
Middle Deemed Secondary (M)	11.4	8.1
Grant-Maintained Secondary (GMS)	11.7	19.2
All State Secondary Schools in England (SMS + SMM + GMS)	88.8	85.4
Independent Secondary (teaching 10+ age range) (IS)	10.9	14.1
City Technology College (CTC)	0.3	0.4

Table 3.6 Comparison between the Initial Main Survey Sample and the Responding Sample

3.5.5 Statistical Analysis

The survey employed continuous, ratio and interval variables, all of which have range and scale (eg. time in minutes per week spent on extra-curricular activities) in addition to nominal and ordinal variables which do not have the same relationship of scale (eg. type of school) (Cohen & Holliday, 1982; Cohen & Manion, 1994; Ferguson, 1981). Two files were constructed: a data file and a command file. Variable names were assigned to the data, each variable name being a string of up to 8 letters.

The first stage of the analysis involved checking a small selection of the data for reasonableness or validity. It was also necessary to reduce the number of missing values amongst the responses. This involved re-reading questionnaires to try and interpret vague or unclear responses or, in some cases, consulting current education directories or even telephoning the school to ascertain information regarding the type,

age range, gender mix and size of the school (where this information was missing from the questionnaire). In order to retain important contextual data, it was also necessary to create some new categories (eg. for single sex schools with mixed sex sixth forms). Having 'tidied up' and retained as much data as possible, frequency tables were obtained for each nominal and ordinal variable detailing value labels, frequencies, valid and cumulative percentages. Values for the valid case numbers and the missing cases were also provided. Descriptive data were obtained for the continuous variables detailing the mean, standard deviation, minimum and maximum values, and the valid number of cases.

The second stage of the analysis involved collapsing categories of some variables into fewer categories and re-coding them in order to investigate potential associations between variables. Variables used to stratify the sample such as the type, gender, size and geographical location of the school required that the categories were collapsed to overcome the problem of low numbers and to provide more meaningful interpretation of the data. Examples included the following: the variable 'type' (referring to the type of school) was re-coded from eight categories in the questionnaire to two categories (state and independent schools); the variable 'gender' was re-coded from four categories in the questionnaire to two categories (mixed and single sex schools); and the variable 'total number of pupils in the school' was re-coded from fourteen categories in the questionnaire to three categories for analytical purposes, small (up to 600 pupils), medium-sized (601-900 pupils) and large (more than 900 pupils).

In order to explore differences in schools in a number of areas of England, the schools in the 109 LEAs were placed initially into three geographical regions (South, Midlands, North). The South region comprised: Avon, Berkshire, Buckinghamshire, Cornwall, Devon, Dorset, East Sussex, Essex, Gloucestershire, Hampshire, Hertfordshire, Isle of Wight, Kent, London, Oxfordshire, Somerset, Surrey, West Sussex, Wiltshire (44.6% of the initial sample). The Midlands region comprised: Bedfordshire, Birmingham, Cambridgeshire, Cheshire, Coventry, Derbyshire, Hereford and Worcester, Leicestershire, Lincolnshire, Norfolk, Northamptonshire, Nottinghamshire, Rutland, Shropshire, Staffordshire, Suffolk, Warwickshire (27.9% of the initial sample). The North region comprised: Birkenhead, Cleveland, Cumbria, Durham, Humberside, Lancashire, Manchester, Merseyside, Northumberland, North Yorkshire, South Yorkshire, Tyne and Wear, West Yorkshire (27.5% of the initial sample).

In addition, potential associations were explored between the results of female and male PE HoDs, and between those of 'more' and 'less' experienced PE HoDs. To

permit the latter, a new variable was created which related to the number of years experience of the respondent as PE HoD. A 'less experienced' PE HoD referred to a respondent with less than or equal to five years experience as PE HoD, and a 'more experienced' PE HoD was one with more than five years experience in that position. Five years experience as PE HoD was selected as the 'cut-off' point as, from my own personal experience and that of other teachers, this period of time seemed to be sufficiently long to permit a new PE HoD to 'settle' into the post and to formulate and implement their own policies.

The third stage of the analysis involved employing non-parametric statistical techniques which are considered appropriate with nominal and ordinal data as, with such data, no assumptions could be made about the distribution of scores. The chi-square technique was applied which provided a statistical test as to the significance of the discrepancy between observed and expected results (Ferguson, 1981; de Vaus, 1993). For the chi-square technique to be applicable, the observations had to be independent and the categories mutually exclusive. The chi-square value was only accepted as valid when none of the cells was zero and no more than twenty per cent of the cells had a value of less than five (Bryman & Cramer, 1990; Cohen & Holliday, 1982; Hunt, 1992). Yates' continuity correction was applied as appropriate (Cohen & Holliday, 1982).

Within the results sections of this thesis, the conventional 0.05 level of significance is accepted and both 0.05 and 0.01 levels of significance are reported. This is in acknowledgement of the fact that type I errors, in which the assumption of no association in the population might be rejected when there really is no association, might occur when using the 0.05 level as it may be too easy a test of the null hypothesis, and type II errors, in which the null hypothesis is accepted when it should be rejected, might occur when using the 0.01 level of significance as it may be too tough a test of the null hypothesis (de Vaus, 1993).

Continuous variables were analysed using the means comparison procedure which compares the mean and standard deviation of continuous variables and allows an analysis of variance (anova) to be performed.

The contextual results from the main survey are presented in Appendix G and the HRE results are presented in Chapter 4.

3.6 Section 5: Survey Costs

The total costs of the survey research amounted to £2116.19. These costs included: stationery, photocopying, postage, secretarial assistance, payment to the DES for data on grant-maintained schools, and assistance with SPSS data analysis. The latter involved primary and secondary analysis of the data, guidance in the use of more advanced statistical techniques, and advice relating to the interpretation and reporting of results. Funding to support the survey research was obtained from the research committees of Loughborough University (£920.00) and the Department of Physical Education, Sports Science and Recreation Management at Loughborough University (£600.00), and the Bergman Osterberg Trust (£350.00).

Chapter 4: Survey Results

4.1 Introduction

The findings of the main survey relating to HRE are reported in this Chapter. Contextual data (such as general information about the school and the PE department, and PE HoDs' views of the NCPE and INSET) are reported in Appendix G. The HRE results are presented in seven main sections: (1) attitudes and views, (2) policy, organisation and delivery, (3) terminology, knowledge base and practical context, (4) liaison, support and resources, (5) the extended curriculum, (6) additional comments, and (7) non-respondents. Finally, a summary is presented of the survey results. Within each section, descriptive data are presented either as text, tables and/or figures, followed by inferential data detailing any associations between the findings and the characteristics of the school (these being type, gender, size and geographical location) and the PE HoD (these being gender and teaching experience). The selection of these characteristics and the way in which the categories were formed are explained in Chapter 3.

Throughout this section, valid responses have been reported. Unless otherwise stated, the number of valid responses is up to five per cent less than or equal to 728 which is the total number of respondents to the main survey questionnaire. In some cases, the number of valid responses was less than 728 as the questions may not have applied to the particular school context of the respondent. For example, some questions required responses for each of up to seven year groups yet many schools did not cater for such a wide age-span. Thus, PE HoDs in schools teaching eleven to fourteen year olds did not respond to questions relating to years ten to thirteen (see Tables 4.6 and 4.7). Similarly, some schools were not delivering all of the NCPE activity areas and therefore there were non-responses to questions regarding some of the areas (see Table 4.5). Non-response rates of more than five per cent are reported and commented upon. The tables and figures detail the mean value for continuous variables and the percentage for categorical variables. Some questions permitted multiple responses (for example, regarding the names used to describe health-related work, and the different health-related activities offered by the PE department) and required that significance levels were calculated for each of the possible responses (see Figures 4.9 to 4.13).

4.2 Section 1: Attitudes and Views

4.2.1 School Approach to Health

With respect to the overall approach to health within secondary schools, just over a third of PE HoDs claimed that working towards health was an important cultural practice within their schools (34.1%) whilst just over half claimed that it was only partially so (55.6%) and a tenth claimed that it was not an important cultural practice within their schools (10.3%). With respect to this issue, no significant differences were found between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) small, medium and large schools, or (4) schools in the South, Midlands and North of England, or between (5) female and male PE HoDs, or (6) more and less experienced PE HoDs.

4.2.2 Views of HRE as a Compulsory Component of PE

With specific reference to PE's contribution to health, just over three quarters of PE HoDs were positive about the inclusion of HRE in the NCPE with just less than a fifth feeling neutral or undecided and very few feeling negative about the issue (Figure 4.1). Most independent schools were following either all or some aspects of the NCPE (81.6%) and over two thirds of the PE HoDs in these schools claimed to be following the HRE requirements (71.4%).

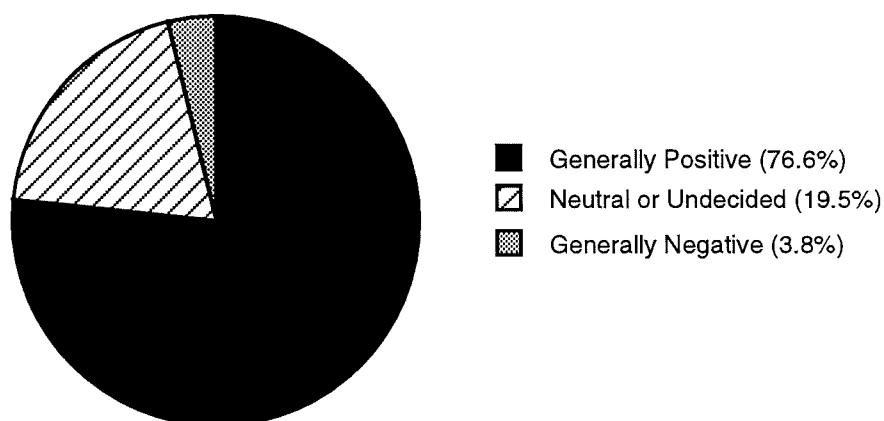


Figure 4.1 Secondary School PE HoDs' Views of HRE within the NCPE (N=706)

With respect to views about HRE being a compulsory component of PE, there were no significant differences between PE HoDs in (1) state and independent schools, or

(2) mixed and single sex schools, or (3) small, medium and large schools, or (4) schools in the South, Midlands and North of England, or between (5) female and male PE HoDs, or (6) more and less experienced PE HoDs.

4.2.3 Views of the HRE Requirements for KS3

Focusing on the HRE specific requirements for KS3 (DES & WO, 1992), the results indicated that most PE HoDs considered the requirements to be important enough to be compulsory and relevant for the age group (Table 4.1 and Figure 4.2). Views varied as to how easy the statement was to interpret and assess and how best to deliver HRE at KS3 (Table 4.1 and Figure 4.2). Less than a third considered that HRE could be delivered through the activity areas alone and well over a third of PE HoDs were undecided as to whether HRE should be delivered at KS3 through the activity areas alone or through specific units in PE (Table 4.1 and Figure 4.2).

Views of the EKS 3 HRE Statement	Cases n	Yes/ Agree %	Neutral/ Undecided %	No/ Disagree %
Is important enough to be compulsory	683	78.8	17.0	4.2
Is relevant for the age group	671	72.4	20.3	7.3
Is easy to interpret in terms of content	654	49.7	38.4	11.9
Is easy to assess	658	21.7	45.6	32.7
Can be delivered via activity areas alone	655	29.0	37.4	33.6
Needs to be delivered via specific units	637	39.1	41.6	19.3

Table 4.1 Secondary School PE HoDs' Views of the EKS 3 HRE Statement

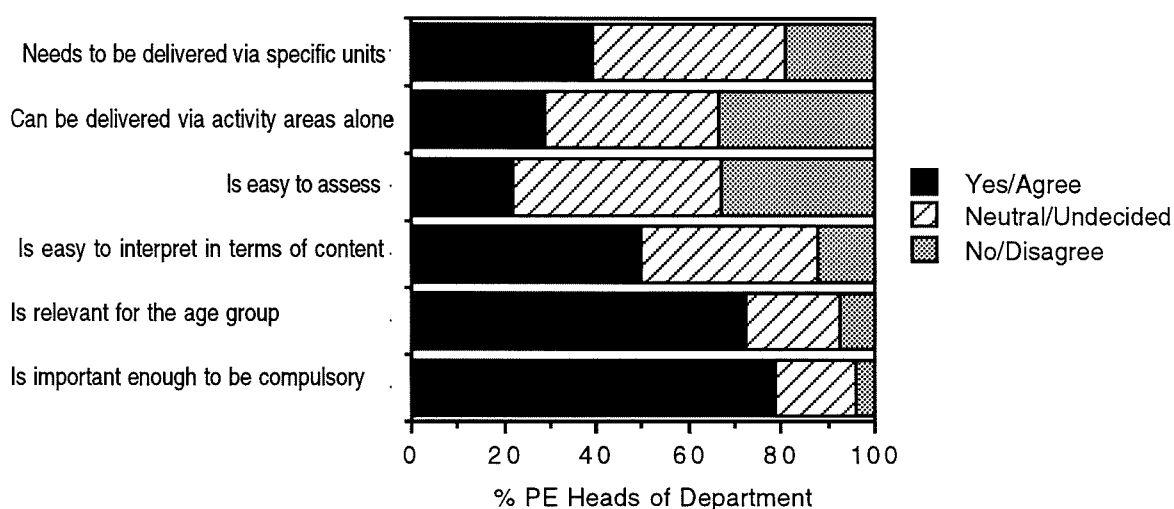


Figure 4.2 Secondary School PE HoDs' Views of the EKS 3 HRE Statement: 'By the end of the key stage, pupils should be able to understand the short and long term effects of exercise on the body systems and decide where to focus their involvement in physical activity for a healthy and enjoyable lifestyle' (DES & WO, 1992, p. 8).

More of the less experienced PE HoDs considered the EKS 3 HRE statement to be important enough to be compulsory ($p < 0.05$). More PE HoDs in large and medium-sized schools than in small schools considered the EKS 3 HRE statement to be important enough to be compulsory and considered that it needed to be delivered via specific units ($p < 0.05$). However, more PE HoDs in small schools than in medium-sized and large schools considered the EKS 3 HRE statement to be easy to assess ($p < 0.05$). With respect to views on the EKS 3 HRE statement, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) schools in the South, Midlands and North of England, or between (4) female and male PE HoDs.

4.2.4 Views of the HRE Requirements for KS4

With reference to KS4, it was found that the majority of PE HoDs considered the EKS 4 HRE requirement (DES & WO, 1992) to be important enough to be compulsory and relevant for the age group (Table 4.2 and Figure 4.3). Views on interpretation and assessment were divided, with over a third of the PE HoDs considering the EKS 4 HRE requirement to be difficult to assess (Table 4.2 and Figure 4.3). Less than a fifth considered that HRE could be delivered through the

activity areas alone at KS4 (Table 4.2 and Figure 4.3). Just less than half of the PE HoDs considered that HRE needs to be delivered through specific units in PE at KS4 (Table 4.2 and Figure 4.3).

Views of the EKS 4 HRE Statement	Cases n	Yes/ Agree %	Neutral/ Undecided %	No/ Disagree %
Is important enough to be compulsory	620	65.0	27.6	7.4
Is relevant for the age group	616	75.2	20.3	4.5
Is easy to interpret in terms of content	604	42.1	43.0	14.9
Is easy to assess	611	18.3	46.6	35.0
Can be delivered via activity areas alone	603	18.2	41.1	40.6
Needs to be delivered via specific units	590	43.7	41.2	15.1

Table 4.2 Secondary School PE HoDs' Views of the EKS 4 HRE Statement

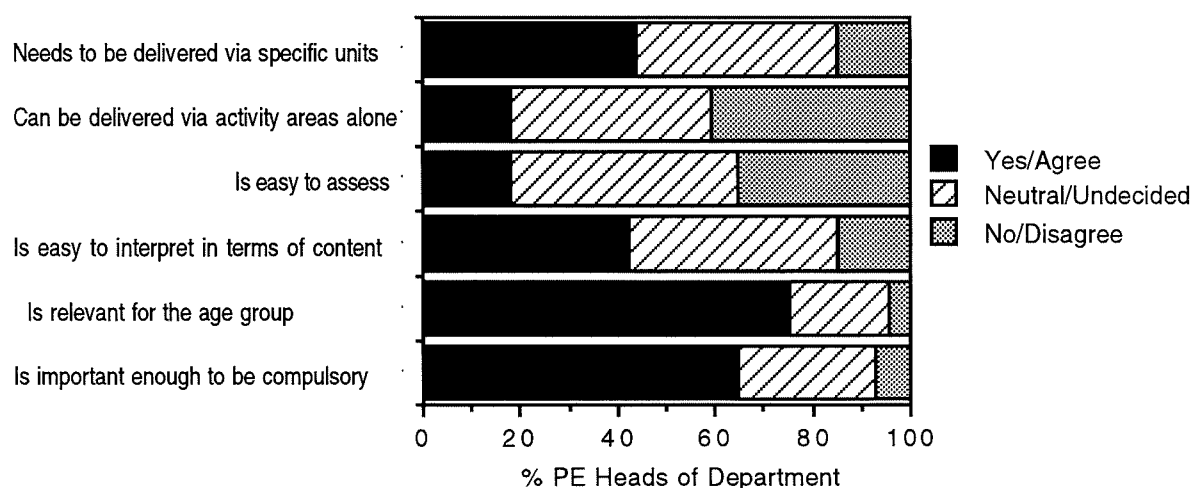


Figure 4.3 Secondary School PE HoDs' Views of the EKS 4 HRE Statement: 'By the end of the key stage, pupils should be able to 'prepare, carry out and monitor personal programmes for a healthy and enjoyable lifestyle, considering the use of community resources where appropriate' (DES & WO, 1992, p. 10).

More female than male PE HoDs considered the EKS 4 HRE statement to be easy to interpret and assess ($p < 0.05$). More of the PE HoDs in small than in medium-sized

and large schools considered the EKS 4 HRE statement to be easier to assess ($p<0.05$). More PE HoDs in large (53.2%) than in medium-sized (39.0%) and small schools (37.0%) considered that the EKS 4 HRE statement needed to be delivered via specific units ($p<0.01$). Differences were also noted in schools in different geographical areas in that a permeated approach through the activity areas seemed to be favoured more by PE HoDs in schools in the North and Midlands than the South of England ($p<0.05$) and HRE units seemed to be favoured more by PE HoDs in schools in the South than the Midlands or the North of England ($p<0.05$). There were no significant differences between PE HoDs with respect to views on the EKS 4 HRE statement in (1) state and independent schools, or (2) mixed and single sex schools, or between (3) more and less experienced PE HoDs.

4.2.5 Views of HRE as an Activity Area within the NCPE

Just over half of PE HoDs thought that HRE should have been a specific activity area within the PE curriculum (55.6%). The non-response rate for the question was ten per cent which was possibly due to PE HoDs being undecided or neutral on the issue. More PE HoDs in mixed (58.6%) than single sex (45.3%) schools thought that HRE should have been an activity area ($p<0.01$). More PE HoDs in the South of England (60.0%) than the North (54.6%) and Midlands (47.8%) thought that HRE should have been an activity area within the PE curriculum ($p<0.05$). There were no significant differences between PE HoDs in (1) state and independent schools, or (2) small, medium and large schools, or between (3) female and male PE HoDs, or (4) more and less experienced PE HoDs.

4.3 Section 2: Policy, Organisation and Delivery

4.3.1 Schemes of Work for HRE

Well over two thirds of PE HoDs (71.0%) had a current written scheme of work for HRE. Three-quarters of state schools (75.2%) had written schemes of work for HRE in comparison with less than half of independent schools (42.7%) ($p<0.0001$). More mixed schools (74.0%) had written schemes of work for HRE than single sex schools (60.3%) ($p<0.01$). More PE HoDs in large (80.4%) than in medium-sized (73.3%) or in small schools (58.2%) had written schemes of work for HRE ($p<0.0001$). However, there were no significant differences between PE HoDs in (1) schools in the South, Midlands and North of England, or between (2) female and male PE HoDs, or (3) more and less experienced PE HoDs.

Just less than half (45.2%) of PE HoDs had written or revised the scheme of work for HRE during the previous academic year (1991/92), just less than a third had done this

between two and five years ago (30.0%), just over a fifth had written or revised it during the current academic year (1992/93) (21.7%), and a very small proportion had done so more than five years ago (3.2%). Less experienced PE HoDs (74.0%) had written schemes of work for HRE more recently (in the previous or current school year) than more experienced PE HoDs (61.8%) ($p < 0.05$). With respect to when schemes of work for HRE had been written, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) small, medium and large schools, or (4) schools in the South, Midlands and North of England, or between (5) female and male PE HoDs.

For those without current schemes of work for HRE, over half (58.8%) had plans to write them. Also, more PE HoDs in state (65.4%) than independent schools (38.9%) planned to write them ($p < 0.001$). However, there were no significant differences between PE HoDs in (1) mixed and single sex schools, or (2) small, medium and large schools, or (3) schools in the South, Midlands and North of England, or between (4) female and male PE HoDs, or (5) more and less experienced PE HoDs.

4.3.2 HRE Changes Since the NCPE

Just under a third of PE HoDs had introduced or increased HRE within their curriculum since the introduction of the NCPE (31.0%). With respect to such changes, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) small, medium and large schools, or (4) schools in the South, Midlands and North of England, or between (5) female and male PE HoDs, or (6) more and less experienced PE HoDs.

4.3.3 Degree of Structure of the Teaching of HRE

Less than a third of PE HoDs described the current organisation of the teaching of HRE as fully structured (Figure 4.4). Over half of PE HoDs described it as partially structured and less than a fifth described it as relatively unstructured (Figure 4.4).

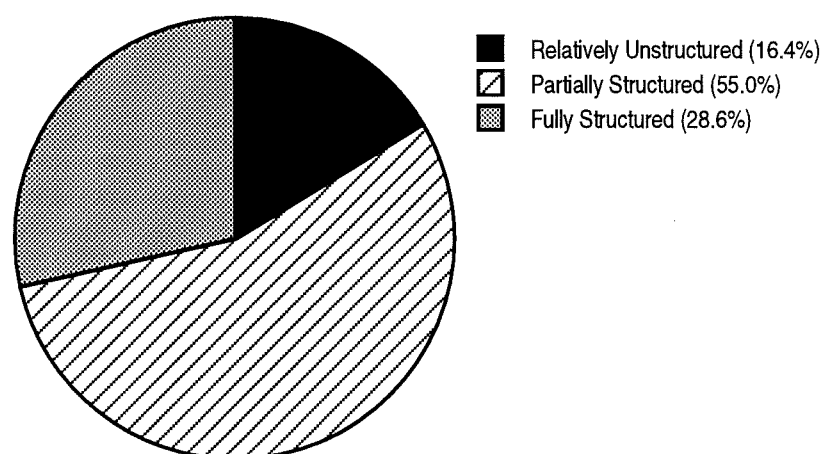


Figure 4.4 Description by Secondary School PE HoDs of the Current Organisation of HRE in the PE Curriculum (N=708)

The teaching of HRE was more structured in state than independent schools ($p<0.0001$), in mixed than single sex schools ($p<0.01$), and in large and medium-sized schools than small schools ($p<0.0001$). There were no significant differences in the degree of structure of the teaching of HRE between PE HoDs in (1) schools in the South, Midlands and North of England, or between (2) female and male PE HoDs, or (3) more and less experienced PE HoDs.

4.3.4 Organisation of the Teaching of HRE

With respect to the way in which HRE was being organised within the curriculum, most PE HoDs were teaching HRE through the PE activity areas (82.3%), over three quarters of PE HoDs were teaching it in specific units in PE (78.3%), and well over half were teaching HRE partly in PE and partly elsewhere in the curriculum (59.3%) (Table 4.3 and Figure 4.5). The most common method of delivery adopted by just over a third of schools was through a combination of approaches involving focused units in PE, integration through the PE activity areas, and within other areas of the school curriculum (Table 4.3 and Figure 4.5).

Organisation of the Teaching of HRE	%
Units in PE + Through PE Activity Areas + Other Curriculum Areas	33.2
Units in PE + Through Some/All PE Activity Areas	29.4
Through Some/All PE Activity Areas + Other Curriculum Areas	14.9
Units in PE + Other Curriculum Areas	9.9
Units in PE Only	5.8
Through Some/All PE Activity Areas	4.8
Totally Within Other Curriculum Areas, None in PE	1.3
Other	0.7

Table 4.3 Organisation of the Teaching of HRE in Secondary Schools (N=710)

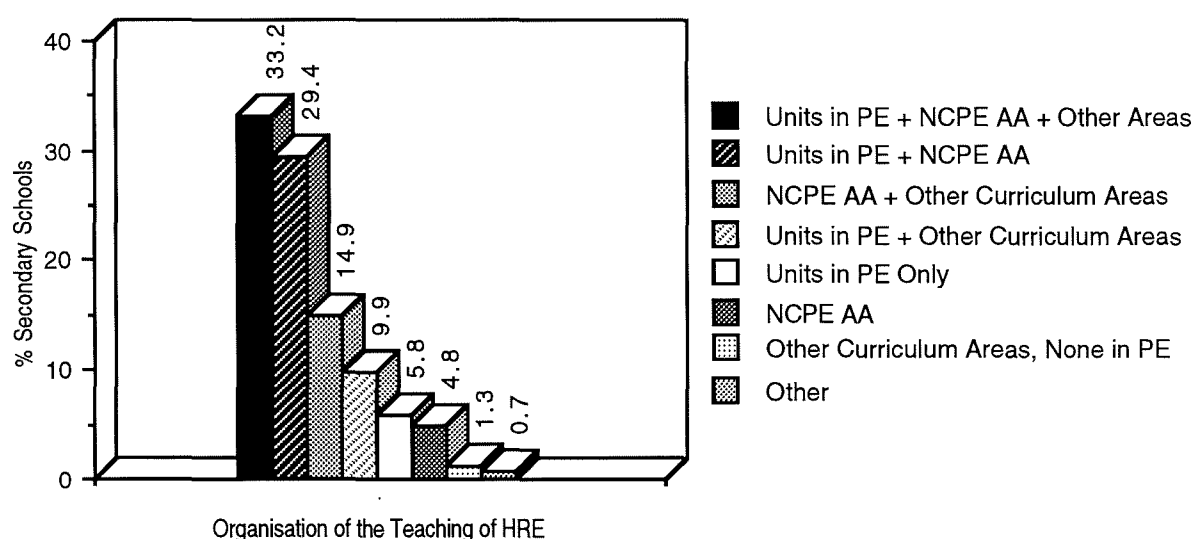


Figure 4.5 Organisation of the Teaching of HRE in Secondary Schools (N=710)

There were significant differences in the approaches in state and independent schools with more HRE units in PE in state schools and more HRE delivered through other areas of the curriculum in independent schools ($p < 0.0001$) (Table 4.4).

Teaching Approaches to HRE in Secondary Schools		
	State (%)	Independent (%)
Through the PE Activity Areas	83.8	73.6
Units in PE	81.2	58.2
Other Areas of the Curriculum	57.5	71.4

Table 4.4 Teaching Approaches to HRE in State and Independent Secondary Schools (N=710)

With respect to the way in which HRE was organised within the curriculum, there were significant differences between small, medium and large schools ($p < 0.01$) with more small schools permeating HRE through the activity areas than medium-sized or large schools. However, there were no significant differences between PE HoDs in (1) mixed and single sex schools, or (2) schools in the South, Midlands and North of England, or between (3) female and male PE HoDs, or (4) more and less experienced PE HoDs.

4.3.5 HRE Delivery through the NCPE Activity Areas

HRE was reported to be delivered through all six of the NCPE activity areas. Just less than half of the PE HoDs claimed to be teaching HRE in a structured way through athletics and just over a third claimed to be teaching HRE in a structured way through games and gymnastics (Table 4.5 and Figure 4.6). Just less than sixty per cent of PE HoDs described as unstructured the teaching of HRE through games and through gymnastics (Table 4.5 and Figure 4.6).

Description of the Delivery of HRE through the NCPE Activity Areas				
Activity Area	Cases n	Structured Manner %	Currently Unstructured %	Not At All %
Athletic Activities	654	49.4	47.4	3.2
Dance	538	22.9	48.9	28.3
Games	634	36.3	59.6	4.1
Gymnastic Activities	595	34.5	58.0	7.6
OAA	476	19.1	44.3	36.6
Swimming	494	25.1	42.5	32.4

Table 4.5 Description of the Delivery of HRE through the NCPE Activity Areas in Secondary Schools

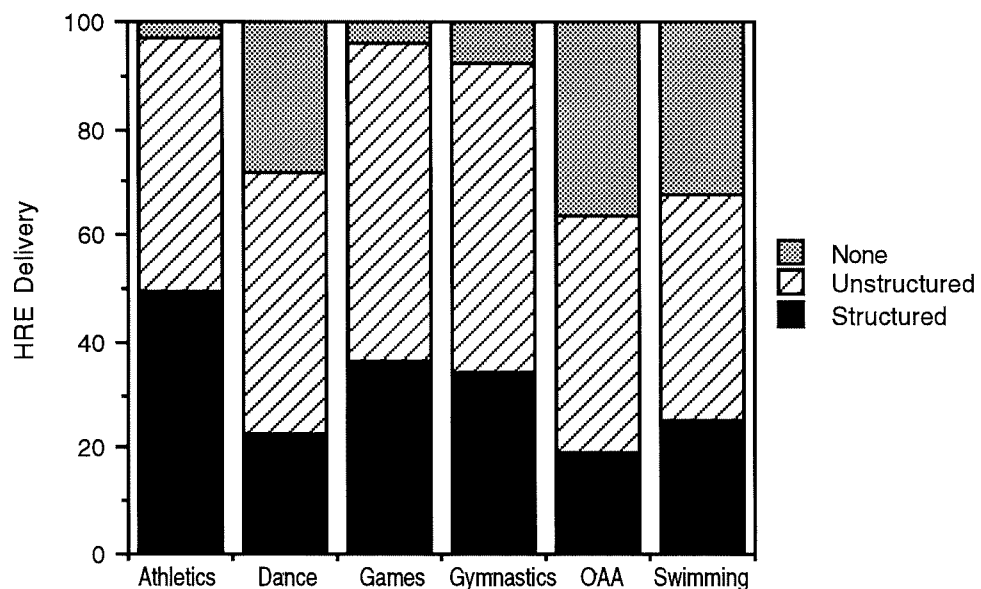


Figure 4.6 Description of the Delivery of HRE through the NCPE Activity Areas in Secondary Schools

The teaching of HRE through gymnastics was more structured in state than independent schools ($p < 0.05$). However, the teaching of HRE through dance ($p < 0.001$) and swimming ($p < 0.0001$) was more structured in independent than state schools. The teaching of HRE through swimming was also found to be more structured in single than mixed sex schools ($p < 0.05$). The teaching of HRE through athletics was more structured in mixed than single sex schools ($p < 0.01$). Some differences were noted between female and male PE HoDs with respect to teaching HRE through OAA ($p < 0.01$) with more female than male PE HoDs describing it as not at all structured yet more male than female PE HoDs describing it as currently unstructured. With respect to the issue of HRE delivery through the activity areas, there were no significant differences between PE HoDs in (1) small, medium and large schools, or (2) schools in the South, Midlands and North of England, or between (3) more and less experienced PE HoDs.

4.3.6 HRE in Separate Blocked Units

Just less than sixty per cent of schools had compulsory HRE units at KS3 (59.3%) and just over a third had compulsory HRE units at KS4 (36.1%) (Figure 4.7). Very few schools had optional HRE units at KS3 (3.0%) but just over a fifth had optional HRE units at KS4 (22.1%) (Figure 4.7).

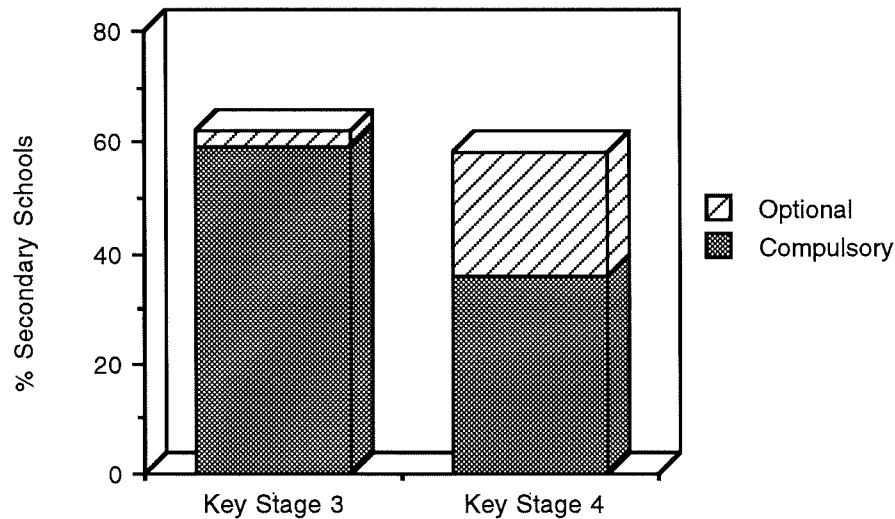


Figure 4.7 HRE in Separate Blocked Units at Key Stages 3 and 4 in Secondary Schools (N=728)

Almost twice as many state (63.0%) as independent schools (35.9%) had compulsory HRE units at KS3 ($p < 0.0001$). More mixed than single sex schools had compulsory and optional HRE units at KS3 ($p < 0.05$). More of the less experienced PE HoDs had optional HRE units at KS4 ($p < 0.05$). There were more compulsory HRE units at KS3 ($p < 0.0001$) and more compulsory and optional units at KS4 ($p < 0.001$) in large than medium-sized schools and more in medium-sized than small schools. With respect to compulsory HRE units at KS3, there were no significant differences between PE HoDs in (1) schools in the South, Midlands and North of England, or between (2) female and male PE HoDs, or (3) more and less experienced PE HoDs. With respect to optional HRE units at KS3, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) schools in the South, Midlands and North of England, or between (3) female and male PE HoDs, or (4) more and less experienced PE HoDs. With respect to compulsory HRE units at KS4, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) schools in the South, Midlands and North of England, or between (4) female and male PE HoDs, or (5) more and less experienced PE HoDs. With respect to optional HRE units at KS4, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) schools in the South, Midlands and North of England, or between (4) female and male PE HoDs.

In schools with HRE units, the time allocation for the units was variable, ranging from eight to nine hours per school year for years seven to eleven. Virtually all of the HRE units were compulsory for years seven to nine, for over three quarters of year ten and for over half of year eleven (Table 4.6). Most of the HRE blocks were optional for years twelve and thirteen (Table 4.6). The gender groupings were variable in mixed sex schools with about two-thirds of schools with HRE units having mixed sex groups for years seven and eight, and over half having mixed sex groups for years nine to eleven (Table 4.7). The percentages in Table 4.7 do not add up to one hundred percent as a small proportion of schools (ranging from two to three per cent) indicated that some groups in the same year were taught HRE in mixed sex groups and others in single sex groups.

Year	Cases n	Cases % Yr	Mins/Year		Organisation of HRE Units (%)			
			Mean	SD	Mixed Sex	Single Sex	Compulsory	Optional
7	302	50.2	481.06	262.33	58.1	40.0	98.3	1.7
8	326	52.8	478.63	254.47	54.1	43.2	98.4	1.3
9	332	54.3	490.65	280.57	43.6	53.6	97.9	2.1
10	320	53.0	541.77	394.90	49.8	47.7	77.4	22.6
11	247	41.0	538.00	387.87	56.6	40.7	58.0	42.0
12	38	10.5	687.89	744.90	60.5	37.2	22.4	77.6
13	28	7.7	756.79	869.85	59.4	37.5	15.4	84.6

Table 4.6 HRE Units in Secondary Schools: Prevalence, Duration, Gender Groupings and Compulsory/Optional Status

Year	Cases n	HRE Units in Mixed Sex Schools	
		Mixed Sex %	Single Sex %
7	259	70.3	27.4
8	282	63.5	33.3
9	293	51.5	45.1
10	270	60.7	36.3
11	218	67.0	29.8
12	27	88.9	7.4
13	21	90.5	4.8

Table 4.7 Gender Groupings of HRE Units in Mixed Sex Secondary Schools

Independent schools were found to have more HRE periods per year for year ten (13.9) than state schools (10.6) ($p<0.05$). With respect to the number of HRE periods per year group, there were no significant differences between PE HoDs in (1) mixed and single sex schools, or (2) small, medium and large schools, or (3) schools in the South, Midlands and North of England, or between (4) female and male PE HoDs, or (5) more and less experienced PE HoDs. Neither were there significant differences in the time spent on HRE per year between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) small, medium and large schools, or (4) schools in the South, Midlands and North of England, or between (5) female and male PE HoDs, or (6) more and less experienced PE HoDs.

There were more mixed sex HRE classes in state than independent schools for years eight and thirteen ($p<0.05$). More male than female PE HoDs had mixed sex groupings for HRE for years seven, nine and ten ($p<0.05$), and years eleven and twelve ($p<0.01$). More of the less experienced PE HoDs had mixed sex groupings for year ten than the more experienced PE HoDs ($p<0.05$). With respect to this issue, there were no significant differences between PE HoDs in (1) small, medium and large schools, or (2) schools in the South, Midlands and North of England.

More experienced PE HoDs had more compulsory HRE for years ten and eleven ($p<0.05$) than less experienced PE HoDs. With respect to whether HRE was compulsory or optional, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) small, medium and large schools, or (4) schools in the South, Midlands and North of England, or between (5) female and male PE HoDs.

The majority of the HRE units were delivered during the Autumn and/or Spring Terms (63.6%) (Table 4.8).

Time of School Year in which HRE Units were Delivered			
	%		%
Autumn and Spring Terms	38.9	Autumn and Summer Terms	1.0
All 3 Terms	30.8	Summer Term	0.8
Spring Term	10.6	Spring and Summer Terms	0.3
Autumn Term	14.1	Other	3.5

Table 4.8 Time of School Year in which HRE Units were Delivered in Secondary Schools (N=604)

Some differences were noted in schools of different sizes with small schools tending to deliver HRE units in either the Autumn or Spring terms ($p<0.05$). However, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) schools in the South, Midlands and North of England, or between (4) female and male PE HoDs, or (5) more and less experienced PE HoDs.

4.3.7 Focus and Balance of HRE Units

PE HoDs were asked about the focus of their HRE units with respect to whether they were activity-based (eg. units on aerobics, circuit-training, skipping) or theme-based (eg. units on heart health, muscle health, designing exercise programmes), or a mixture of both. Just over half of schools had HRE units comprising a mixture of activity-based and theme-based work, just over a third had activity-based HRE units, and less than ten per cent had theme-based units (Figure 4.8).

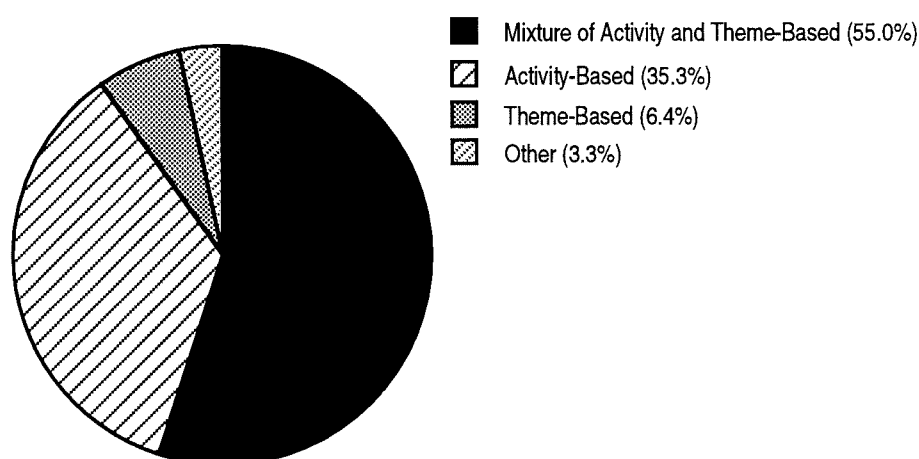


Figure 4.8 Focus of HRE Units in Secondary Schools (N=607)

More independent than state schools had activity-based units ($p<0.01$) but there were no significant differences in the focus of HRE units between PE HoDs in (1) mixed and single sex schools, or (2) small, medium or large schools, or (3) schools in the South, Midlands and North of England, or between (4) female and male PE HoDs, or (5) more and less experienced PE HoDs.

The vast majority of schools (91.9%) had predominantly practical HRE units (i.e. most lessons were active and delivered in a practical area) (Table 4.9), more so in state than independent schools ($p<0.01$). With respect to the practical/theory balance

of the units, there were no significant differences between PE HoDs in (1) mixed and single sex schools, or (2) small, medium and large schools, or (3) schools in the South, Midlands and North of England, or between (4) female and male PE HoDs, or (5) more and less experienced PE HoDs.

Practical-Theory Balance of Health-Related Units	%
Mostly practical with all lessons taken in a practical area	76.3
Mainly practical with a few lessons taken in a classroom	15.6
Split evenly between practical and classroom-based lessons	5.9
Mainly classroom-based with a few practical lessons	1.7
Mostly theory with all lessons taken in a classroom	0.5

Table 4.9 Description of the Practical-Theory Balance of Health-Related Units in Secondary Schools (N=604)

4.3.8 Teachers of HRE

In most schools, HRE was taught by all members of the PE department (71.2%) although, in just less than a quarter of schools, only some members of the PE department were teaching HRE (22.9%). The latter situation was more common in independent than state schools ($p<0.001$), in schools with female PE HoDs ($p<0.05$), and in schools with less experienced PE HoDs ($p<0.01$). In almost a third of schools, staff from other departments also taught HRE (32.0%), and in just over an eighth of schools, outside expertise was used to help deliver HRE (12.9%). Outside expertise was more commonly used in independent than state schools ($p<0.05$). Some differences were noted in schools of different sizes. In small schools HRE tended to be delivered by some, rather than all members of the PE staff ($p<0.0001$), and staff from other departments contributed more to the teaching of HRE in small and large schools than in medium-sized schools ($p<0.05$). With respect to staff from other departments teaching HRE, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or between (3) female and male PE HoDs, or (4) more and less experienced PE HoDs. Neither were there significant differences with regards to the staff teaching HRE between PE HoDs in (1) mixed and single sex schools, or (2) schools in the South, Midlands and North of England.

4.4 Section 3: Terminology, Knowledge Base and Practical Context

4.4.1 HRE Terminology

Terminology for the 'health and fitness' area varied and some PE HoDs employed different terms with different year groups. Over half of PE HoDs used the term 'health-related fitness' (HRF) for the area and almost a third used the term 'fitness' (Figure 4.9). About a quarter currently used the NC term 'health-related exercise' (HRE) and another quarter used the term 'health and fitness' (Figure 4.9).

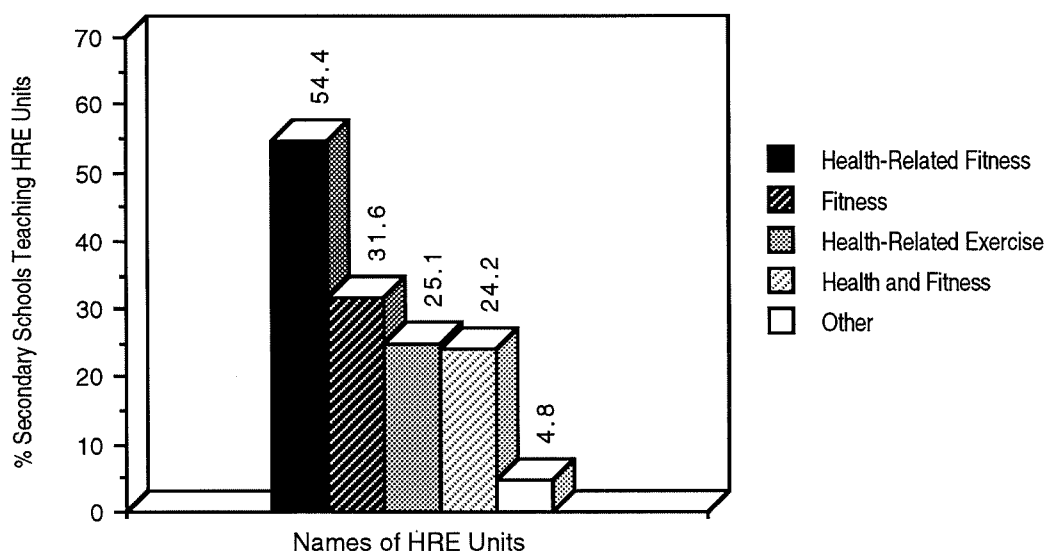


Figure 4.9 Names Given to HRE Units in Secondary Schools (N=728)

The terms 'health-related fitness' (HRF) ($p<0.001$) and 'health-related exercise' (HRE) ($p<0.01$) were used more in state than independent schools whilst the term 'fitness' was used more in independent than state schools ($p<0.05$) and more in single than mixed sex schools ($p<0.05$). With respect to terms used for this area of work, there were no significant differences between PE HoDs in (1) small, medium and large schools, or (2) schools in the South, Midlands and North of England, or between (3) female and male PE HoDs, or (4) more and less experienced PE HoDs.

4.4.2 Health-Related Knowledge Base

Most HRE programmes included work on stamina (92.0%), suppleness (87.4%) and strength (84.2%) and the majority also included fitness testing (61.0%) (Figure 4.10). Just less than half included work on designing exercise programmes (46.6%) and less than a third incorporated work on weight management (29.0%) (Figure 4.10). Only a fifth of schools included topics such as relaxation and stress management (21.4%) within their PE programmes (Figure 4.10).

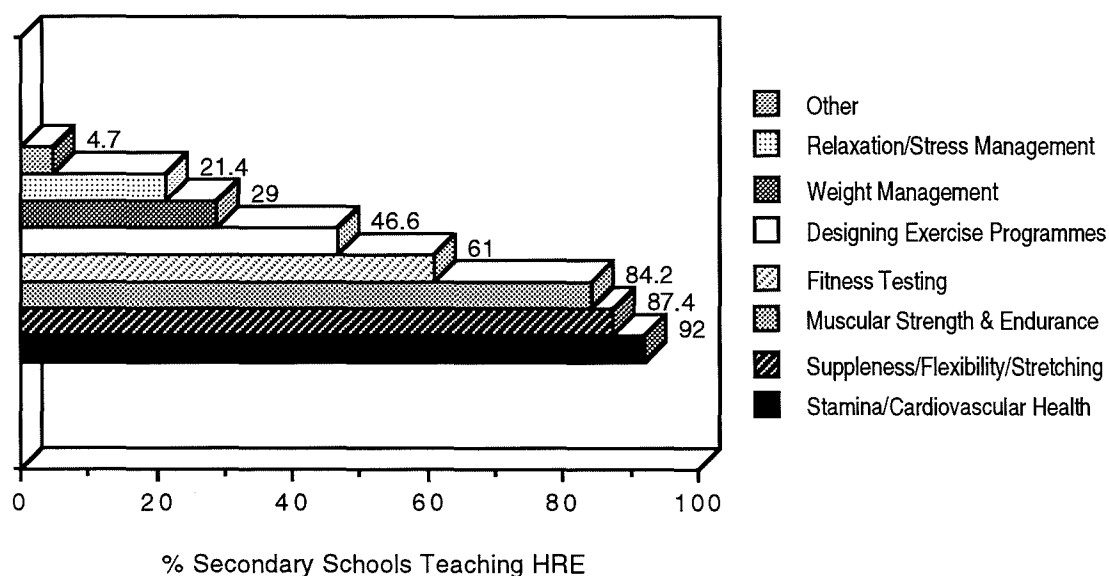


Figure 4.10 HRE Content Areas within the PE Curriculum in Secondary Schools (N=728)

More state than independent schools included stamina ($p<0.0001$), suppleness ($p<0.001$), strength ($p<0.01$), fitness testing ($p<0.01$), and designing exercise programmes ($p<0.01$). More mixed than single sex schools included stamina ($p<0.01$) and more single than mixed sex schools included relaxation/stress management ($p<0.05$). More PE HoDs in medium-sized and large schools than small schools included the following content areas: strength ($p<0.0001$), stamina ($p<0.0001$), fitness testing ($p<0.0001$), designing exercise programmes ($p<0.0001$) and suppleness ($p<0.01$). Some geographical differences were noted with suppleness being included in the content of health-related work more in schools in the South (91.3%) than in the Midlands (86.3%) or the North of England (82.1%) ($p<0.01$). More female than male PE HoDs included relaxation/stress management ($p<0.0001$) and more male than female PE HoDs included strength work ($p<0.05$) and fitness testing ($p<0.05$). More experienced PE HoDs included weight management ($p<0.01$) and relaxation/stress management than did less experienced PE HoDs ($p<0.05$).

4.4.3 Health-Related Activities

Most schools offered a variety of health-related activities within the curriculum. As part of the compulsory curriculum, more than half of schools included cross-country running and circuit training, over a third included aerobics, about a quarter included skipping and jogging, and about a fifth included weight training using fixed weights (Table 4.10 and Figure 4.11). As an optional activity within the curriculum, just less than half of schools offered aerobics, just over a third offered weight training using fixed weights, about a quarter offered circuit training, and just over a fifth offered cross-country running and weight training using free weights (Table 4.10 and Figure 4.12). Within the extra-curricular programme, over a third of schools offered cross-country running and aerobics, just over a quarter offered weight training using fixed weights, and about a fifth offered circuit training, weight training using free weights, and jogging (Table 4.10 and Figure 4.13). Few schools offered water exercise or step aerobics within their curricular or extra-curricular programmes (Table 4.10 and Figures 4.11-4.13).

Health-Related Activity	Compulsory %	Optional %	Extra-Curricular %
Cross Country Running	61.5	21.4	40.0
Circuit Training	56.2	25.8	19.1
Aerobics	40.5	49.5	34.1
Skipping	29.1	10.2	5.6
Jogging	25.3	15.4	17.0
Weight Training (fixed weights)	21.2	36.8	26.5
Keep Fit	13.0	13.2	8.9
Weight Training (free weights)	12.4	21.8	17.2
Step Aerobics	6.2	17.4	12.1
Water Exercise	6.2	7.4	4.3
Other	1.8	0.4	1.1

Table 4.10 Health-Related Activities in the PE Curriculum (Compulsory and Optional) and Extra-Curricular Programme in Secondary Schools (N=728)

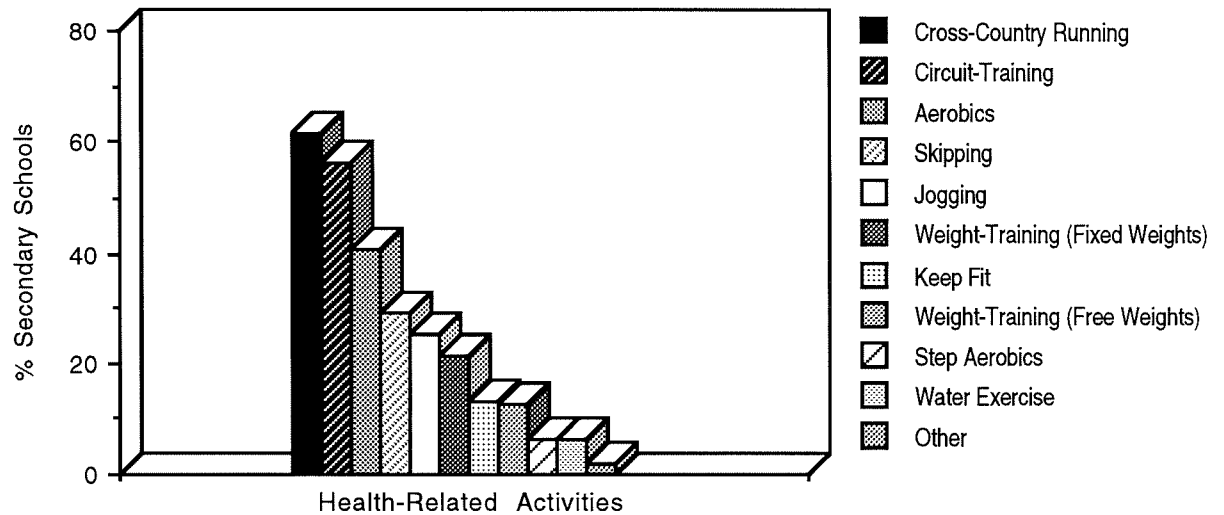


Figure 4.11 Health-Related Activities in the Compulsory PE Curriculum in Secondary Schools (N=728)

Cross-country running ($p < 0.001$) and aerobics ($p < 0.01$) were included more in the compulsory PE curricula of state than independent schools, and cross-country running ($p < 0.0001$), aerobics ($p < 0.05$) and weight training (free weights) ($p < 0.05$) were included more in the compulsory PE curricula of mixed than single sex schools. Water exercise was included more in the compulsory PE curricula of independent than state schools ($p < 0.01$). Weight training (free and fixed weights) was included within the compulsory PE curriculum more in large and medium-sized schools than small schools ($p < 0.0001$). More male than female PE HoDs included cross-country running ($p < 0.0001$), circuit-training ($p < 0.01$), weight-training (both fixed and free weights) ($p < 0.01$) and keep fit ($p < 0.01$) in the compulsory PE curriculum whilst more female than male PE HoDs included skipping ($p < 0.05$). With respect to health-related activities in the compulsory PE curriculum, there were no significant differences between PE HoDs in schools in the South, Midlands and North of England.

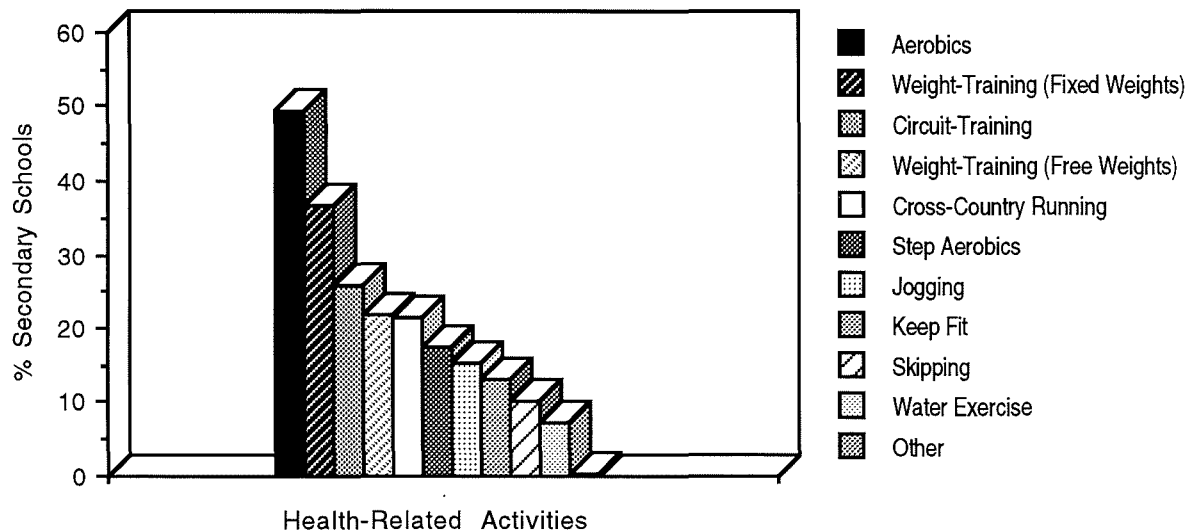


Figure 4.12 Optional Health-Related Activities in the PE Curriculum in Secondary Schools (N=728)

Aerobics ($p<0.05$), circuit-training ($p<0.05$), and weight-training (fixed and free weights) ($p<0.001$) were offered more as options in the PE curricula of state than independent schools. Water exercise was offered more as an option in the PE curricula of independent than state schools ($p<0.05$). Circuit-training and weight-training (fixed weights) ($p<0.05$) were offered more as options in the PE curricula of mixed than single sex schools, and there was more optional jogging in the PE curricula of single than mixed sex schools ($p<0.05$). The following activities were offered more as options in the PE curricula of large and medium-sized schools than small schools: aerobics ($p<0.0001$), weight training (fixed and free weights) ($p<0.0001$), circuit training ($p<0.01$), cross-country running ($p<0.01$) and step aerobics ($p<0.05$). Aerobics was offered as an option in the PE curricula of schools in the South more than in the Midlands or North of England ($p<0.05$). More female than male PE HoDs offered aerobics and skipping ($p<0.05$) and more male than female PE HoDs offered cross-country running ($p<0.01$) as options in the PE programme.

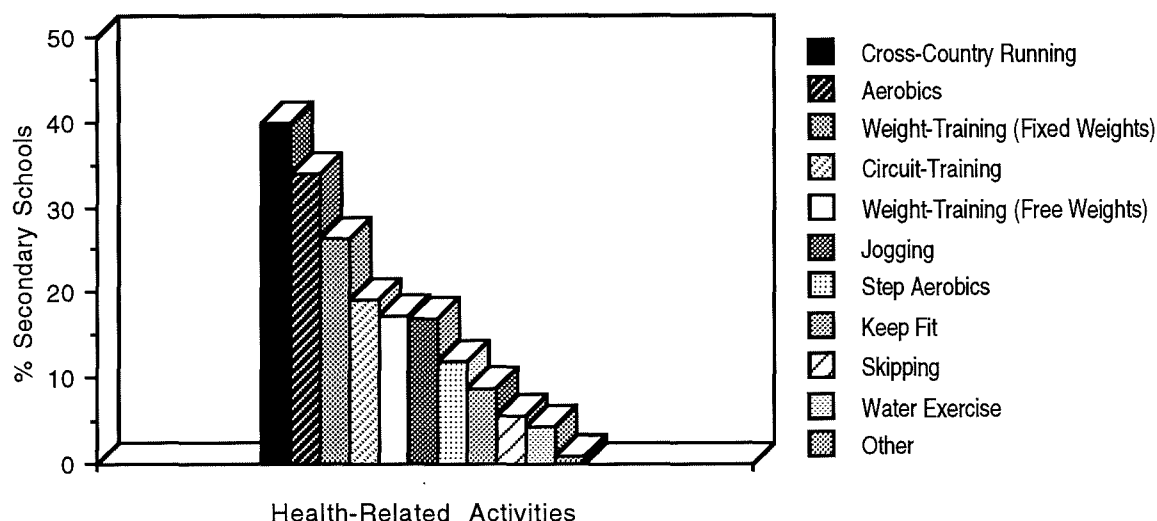


Figure 4.13 Health-Related Activities in the Extra-Curricular PE Programme in Secondary Schools (N=728)

Water exercise ($p<0.0001$), skipping ($p<0.001$), keep fit ($p<0.01$), jogging ($p<0.01$), aerobics and circuit-training ($p<0.05$) were offered more in the extra-curricular PE programmes of independent than state schools and cross-country running was offered more in state than independent schools ($p<0.05$). Weight training (free weights) was offered more in the extra-curricular PE programmes of mixed than single sex schools ($p<0.05$). The following activities were offered more in the extra-curricular PE programmes of large and medium-sized than small schools: cross-country running ($p<0.0001$), weight training (fixed weights) ($p<0.0001$), weight training (free weights) ($p<0.001$) and aerobics ($p<0.05$). More female than male PE HoDs included aerobics and step aerobics ($p<0.05$) and more male than female PE HoDs included weight training with free weights ($p<0.001$) and with fixed weights ($p<0.01$) in the extra-curricular PE programme. There were no significant differences between PE HoDs in (1) schools in the South, Midlands and North of England, or between (2) more and less experienced PE HoDs with respect to the health-related activities offered within the extra-curricular PE programme.

4.4.4 Fitness Testing

Fitness testing was a compulsory component of the PE curriculum in just less than two thirds of schools (62.6%). With respect to compulsory fitness testing, almost half of schools included it for years seven to nine, just over a third did so for year ten, and just under a quarter included it for year eleven (Table 4.11 and Figure 4.14). The percentage of compulsory fitness testing tended to decrease with pupil age whilst the percentage of optional fitness testing increased (Table 4.11 and Figures 4.14-4.15). Few schools had optional testing for years seven to nine, and about a fifth of schools included optional testing for years ten and eleven (Table 4.11 and Figure 4.15).

There was more compulsory fitness testing in large (68.3%) and medium-sized (67.8%) than small schools (50.5%) ($p < 0.0001$) but there were no significant differences in compulsory fitness testing between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) schools in the South, Midlands and North of England, or between (4) female and male PE HoDs, or (5) more and less experienced PE HoDs.

Fitness Testing in the PE Curriculum				
Year	Cases n	Compulsory %	Optional %	None %
7	571	42.8	7.7	37.7
8	588	42.0	7.4	31.3
9	595	46.3	9.8	25.7
10	590	37.9	18.7	24.5
11	534	24.2	21.3	27.9
12	252	2.6	10.2	21.8
13	236	2.3	8.9	21.2

Table 4.11 Prevalence of Fitness Testing in the PE Curriculum in Secondary Schools

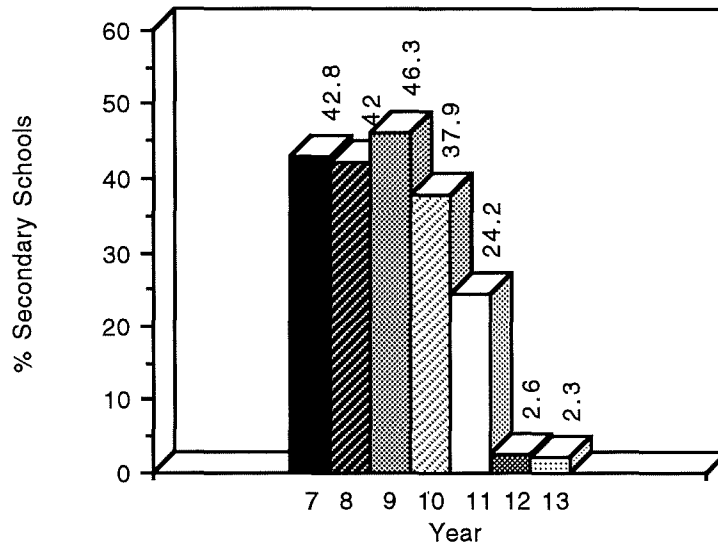


Figure 4.14 Compulsory Fitness Testing in Secondary Schools

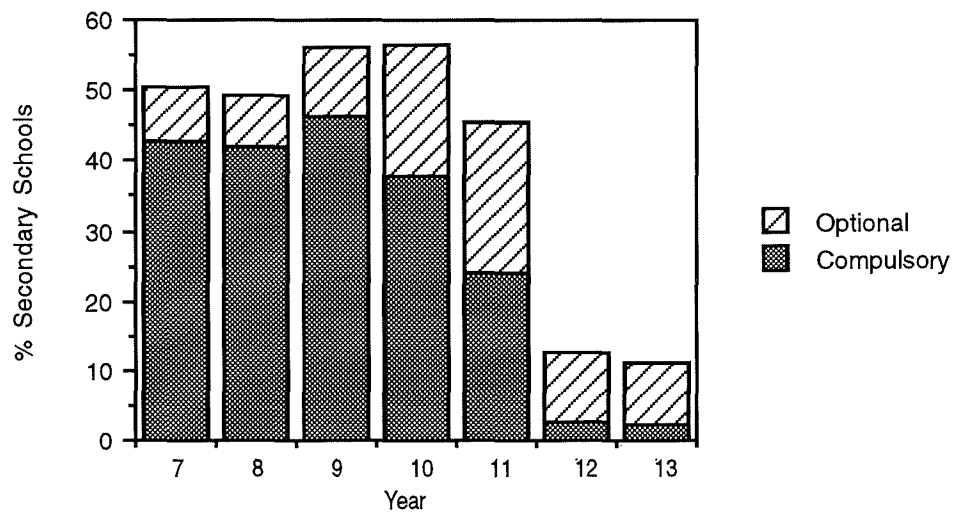


Figure 4.15 Compulsory and Optional Fitness Testing in Secondary Schools

There was more fitness testing (compulsory and optional) at year nine in state than independent schools ($p<0.05$) yet more compulsory fitness testing for year eleven ($p<0.05$), and more fitness testing (compulsory or optional) for years twelve and thirteen ($p<0.0001$) in independent than state schools. There was more compulsory fitness testing at year ten in independent than state schools yet more optional fitness testing in state than independent schools ($p<0.001$). There was more compulsory fitness testing in single than mixed sex schools for year nine ($p<0.01$), and there was less fitness testing overall and more optional fitness testing in mixed than single sex schools for year eleven ($p<0.01$). There was more compulsory fitness testing for all

year groups in medium-sized and large schools than in small schools ($p<0.01$). Some differences were noted among schools in different geographical areas with less fitness testing in years ten and eleven in the South than in the Midlands and the North of England ($p<0.05$). More male than female PE HoDs included compulsory fitness testing for year eight ($p<0.01$) and year nine ($p<0.05$). There were no significant differences between more and less experienced PE HoDs with regards to compulsory or optional fitness testing within the curriculum.

The most commonly-employed fitness tests were: a time/distance run (60.3%), the Multi-Stage Fitness Test (57.0%), a 'sit and reach' flexibility test (53.2%), sit ups/curl ups (49.9%), a step test (43.1%) and push ups (37.0%) (Table 4.12 and Figure 4.16). Almost a fifth of schools also included 'other' fitness tests which were skill-related (18.5%) (Table 4.12 and Figure 4.16).

Fitness Tests	%	Fitness Tests	%
Time/distance run	60.3	Shoulder flexibility test	28.0
Multi-Stage Fitness Test ('bleep' test)	57.0	Body Composition (skinfolds)	26.6
Sit and reach flexibility test	53.2	Back flexibility test	26.2
Sit ups/curl ups	49.9	Pull ups	24.5
Step test	43.1	Other	18.5
Push ups	37.0		

Table 4.12 Fitness Tests Employed by Secondary School PE HoDs (N=728)

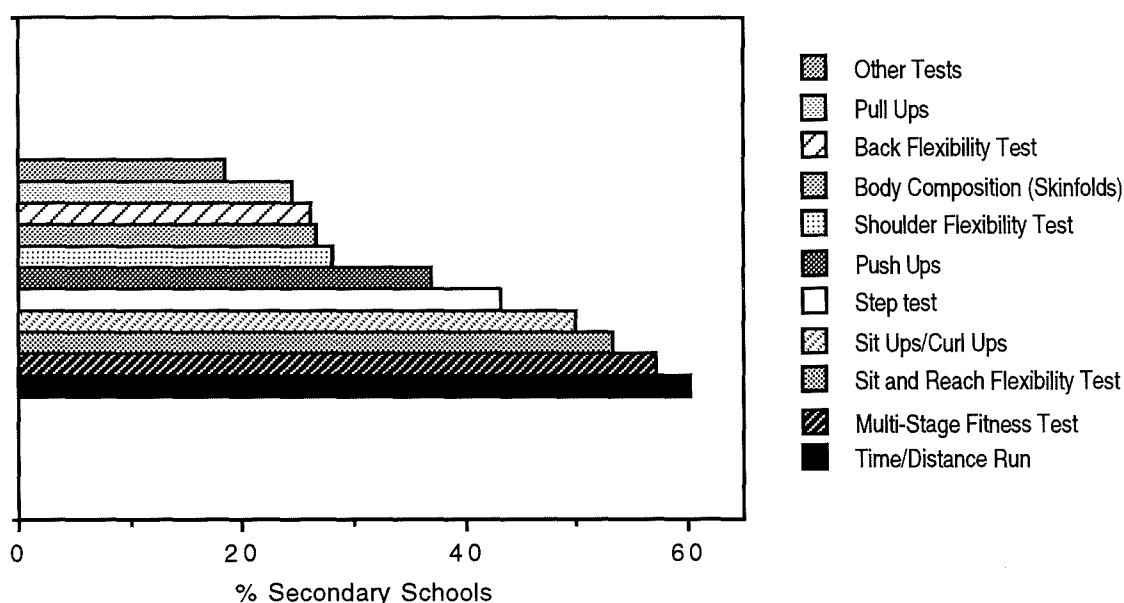


Figure 4.16 Fitness Tests Employed by Secondary School PE HoDs (N=728)

The Multi-Stage Fitness test and shoulder flexibility test were used more in state than independent schools ($p<0.05$) and the Multi-Stage Fitness test was used more in mixed than single sex schools ($p<0.05$). More of the following tests were used in medium-sized and large schools than in small schools: the Multi-Stage Fitness test ($p<0.0001$), 'sit and reach' flexibility test ($p<0.0001$), body composition measures (skinfolds) ($p<0.0001$), a shoulder flexibility test ($p<0.001$), time/distance runs ($p<0.01$), sit ups/curl ups ($p<0.01$), additional tests ($p<0.01$), and a back flexibility test ($p<0.05$). Some significant differences were found across geographical areas, with more PE HoDs in schools in the South (40.6%) than those in the Midlands (37.2%) or the North of England (29.3%) using push ups ($p<0.05$). More female than male PE HoDs included a shoulder flexibility test ($p<0.05$) and more male than female PE HoDs included push ups ($p<0.01$) and pull ups ($p<0.05$). There were no significant differences between more and less experienced PE HoDs with respect to the use of specific fitness tests.

Most PE HoDs stated that they never reported pupils' fitness levels or scores to parents either verbally or in a written report, just less than a third stated that they sometimes did, and just less than ten per cent stated that they always reported pupils' fitness levels or scores to parents (Figure 4.17). More male than female PE HoDs reported fitness levels to parents ($p<0.01$). More of the more experienced PE HoDs reported fitness levels to parents than did less experienced PE HoDs ($p<0.05$). The percentage of non-respondents (12.0%) may have reflected some problems with interpretation of the question. With respect to reporting fitness levels to parents either verbally or in a written report, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) small, medium and large schools, or (4) schools in the South, Midlands and North of England.

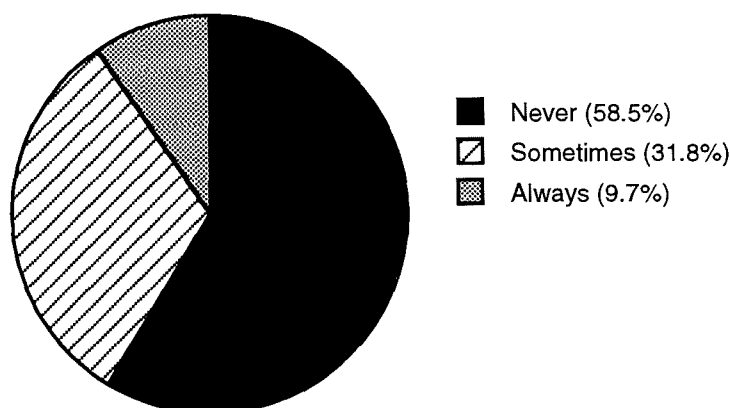


Figure 4.17 Frequency of Reporting Fitness Levels to Parents in Secondary Schools (N=641)

4.5 Section 4: Liaison, Support and Resources

4.5.1 Liaison with the Health Education Co-ordinator

Limitations were noted with respect to liaison with HE co-ordinators in well over a third of schools (42.7%) with the degree of liaison being described as nil (11.2%), limited (16.6%), or acceptable but requiring improvement (14.9%). In just over a quarter of schools (27.7%), the degree of liaison with a HE co-ordinator was described as reasonable (17.4%) or very close (10.3%). However, in just less than a fifth of schools there was no designated HE co-ordinator (19.4%) and in a small number of schools the PE HoD also fulfilled the role of HE co-ordinator (2.6%). In forty seven schools, the response 'other' had been ticked with no specification (6.5%). More experienced PE HoDs had better liaison (very or reasonably close 31.5%) with the person responsible for HE than less experienced PE HoDs (very or reasonably close 22.4%) ($p < 0.05$). There were no significant differences in the degree of liaison with the person responsible for HE between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) small, medium and large schools, or (4) schools in the South, Midlands and North of England, or between (5) female and male PE HoDs.

4.5.2 Liaison with Feeder Primary Schools

Liaison with feeder primary schools was also limited, with over a quarter of PE HoDs not being aware of whether any HRE was included within their feeder school PE curricula (28.0%) and less than a fifth stating that none of their feeder schools included health-related work (17.7%). About half of the PE HoDs considered that some of their feeder schools included health-related work in their curriculum (51.9%), and only a small proportion (2.3%) considered that all of their feeder schools included such work. The percentage of non-respondents (11.7%) may have reflected some problems with interpretation of the question. With respect to feeder primary schools including health-related work in their curriculum, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) small, medium and large schools, or (4) schools in the South, Midlands and North of England, or between (5) female and male PE HoDs, or (6) more and less experienced PE HoDs.

4.5.3 HRE INSET

Less than a third of PE HoDs had received INSET specifically focused on HRE in the previous two years (1992/93 or 1993/94) (31.9%) and less than a fifth had received NC INSET which included the topic of HRE (19.5%). More PE HoDs in large and medium-sized schools had received HRE INSET than those in small schools ($p<0.0001$). With respect to attendance at HRE INSET in 1992/93 or 1993/94, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) schools in the South, Midlands and North of England, or between (4) female and male PE HoDs, or (5) more and less experienced PE HoDs.

The vast majority of PE HoDs considered that some or all of their staff needed HRE INSET (83.9%). In this respect, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) small, medium and large schools, or (4) schools in the South, Midlands and North of England, or between (5) female and male PE HoDs, or (6) more and less experienced PE HoDs.

Furthermore, over a third of PE HoDs considered HRE to be a priority INSET need (35.3%), placing it in the top six priority INSET needs after assessment, recording and reporting (77.7%), planning and implementation (58.8%), teaching and learning styles (43.0%), differentiation (41.9%), and progression (37.4%). More independent than state schools ($p<0.001$), more single than mixed sex schools ($p<0.01$), and more PE HoDs in small than large or medium-sized schools ($p<0.05$) considered HRE to be a priority INSET need. With respect to this issue, there were no significant differences between PE HoDs in (1) schools in the South, Midlands and North of England, or between (2) female and male PE HoDs, or (3) more and less experienced PE HoDs.

4.5.4 Health Education Authority Health and PE Project

Just over half of PE HoDs were aware of the existence of the HEA Health and PE Project (HPEP) based at Loughborough University (54.9%). Almost sixty per cent (59.0%) of PE HoDs in state schools were aware of the HPEP in comparison with just less than thirty per cent (29.5%) of those in independent schools ($p<0.0001$). PE HoDs in large schools were more aware of the HPEP than those in medium-sized or small schools ($p<0.0001$). There were no significant differences in awareness of the HPEP between PE HoDs in (1) mixed and single sex schools, or (2) schools in the South, Midlands and North of England, or between (3) female and male PE HoDs, or (4) more and less experienced PE HoDs.

4.5.5 HRE Texts

A range of HRE texts were used in secondary schools (Table 4.13). About a quarter of schools were using HPEP Newsletters, 'Fitness for Life', 'HRF in PE' and 'Action for Heart Health' (Table 4.13).

HRE Texts Used in Secondary Schools	%
HEA/PEA Health & PE (HPEP) Newsletters (1985-93)	28.3
Fitness for Life (Corbin & Lindsey, 1983)	25.4
HRF in PE (Biddle, 1987)	23.9
Action for Heart Health (Harris & Elbourn, 1990)	23.2
HRF (Tancred, 1987)	20.2
Activity Ideas for Heart Health (Elbourn & Harris, 1989)	19.2
Body in Action (National Coaching Foundation (NCF), 1987)	13.9
The Exercise Challenge (McGeorge, 1989, 1993)	11.4
Further Activity Ideas for Heart Health (Harris & Elbourn, 1991)	11.3
Warming Up and Cooling Down (Harris & Elbourn, 1992)	11.1
Stretching (Anderson, 1980)	8.7
An Introduction to the Structure of the Body (NCF, 1991)	6.6
Swimming for Health (Hardy, 1990)	3.4
Other	14.1

Table 4.13 Health-Related Texts Used by Secondary School PE HoDs (N=728)

More PE HoDs in state than independent schools were using HPEP Newsletters ($p<0.0001$), 'Action for Heart Health', 'Activity Ideas for Heart Health' and 'Fitness for Life' ($p<0.01$), and 'Further Activity Ideas for Heart Health' and the 'Exercise Challenge' ($p<0.05$). More PE HoDs in independent than state schools were using 'Swimming for Health' ($p<0.01$) and 'An Introduction to the Structure of the Body' ($p<0.05$). More PE HoDs in mixed than single sex schools were using HPEP Newsletters and 'Action for Heart Health' ($p<0.05$). The following HRE texts were used more by PE HoDs in medium-sized and large schools than in small schools: HPEP Newsletters, 'Fitness for Life', and 'Body in Action' ($p<0.001$), 'HRF', 'Exercise Challenge', 'Warming up and Cooling Down', and 'Action for Heart Health' ($p<0.01$), 'Activity Ideas for Heart Health', 'HRF in PE' and 'Stretching' ($p<0.05$). More female than male PE HoDs were using 'Activity Ideas for Heart Health' and 'Further Activity Ideas for Heart Health' ($p<0.05$). More experienced PE HoDs were using HPEP Newsletters ($p<0.01$) and 'HRF in PE' ($p<0.05$) than less experienced PE HoDs. There were no significant differences in the use of HRE texts between PE HoDs in schools in the South, Midlands and the North of England.

4.5.6 Health-Related Resources

The most commonly used HRE resources by PE HoDs in curriculum time were commercially produced posters/charts (62.8%), 'home-made' work cards/sheets (50.4%), heart rate/pulse monitors (42.7%), skinfold calipers (40.8%), and weighing scales (39.8%). Other resources used by less than a third of PE HoDs were 'home-made' posters/charts (30.4%), commercially produced work cards/sheets (29.1%), 'home-made' sit and reach boxes (27.2%), spirometers or peak flow meters (23.1%), blood pressure monitors (18.4%), commercially produced 'sit and reach' boxes (14.7%), dynamometers (14.3%), and commercially produced flexibility testers (11.0%). A small proportion of PE HoDs were using pedometers (7.4%) and goniometers (4.0%).

More PE HoDs in state than independent schools were using 'home-made' workcards/sheets ($p<0.0001$), heart rate/pulse monitors ($p<0.001$), commercially produced posters/charts, skinfold calipers and blood pressure monitors ($p<0.01$), 'home-made' posters/charts, commercially produced workcards/sheets, commercially produced 'sit and reach' boxes and dynamometers ($p<0.05$). Flexibility testers/flexmeters ($p<0.01$), heart rate/pulse monitors and skinfold calipers ($p<0.05$) were used more by PE HoDs in mixed than single sex schools. More PE HoDs in medium-sized and large schools than in small schools were using any of the specified health-related resources ($p<0.05$). Heart rate/pulse monitors and blood pressure monitors ($p<0.05$) and pedometers ($p<0.01$) were used more by PE HoDs in schools in the Midlands than the South or North of England. Flexibility testers/flexmeters ($p<0.0001$), weighing scales ($p<0.001$), commercially produced 'sit and reach' boxes ($p<0.01$), commercially produced posters/charts, heart rate/pulse monitors, skinfold calipers and dynamometers were used more by male than female PE HoDs ($p<0.05$). More of the more experienced PE HoDs were using commercially produced posters/charts, skinfold calipers, weighing scales, dynamometers and pedometers ($p<0.05$) whilst more of the less experienced PE HoDs were using 'home-made' workcards/sheets ($p<0.01$) and 'home-made' sit and reach boxes ($p<0.05$).

4.5.7 Health and Fitness Computer Software

Very few PE HoDs in secondary schools were using health and fitness computer software with pupils in curriculum time (6.4%) but, where it was used, it was more often by PE HoDs in large than in small or medium-sized schools ($p<0.05$). With respect to the use of health and fitness computer software, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and

single sex schools, or (3) schools in the South, Midlands and North of England, or between (4) female and male PE HoDs, or (5) more and less experienced PE HoDs.

4.6 Section 5: The Extended Curriculum

4.6.1 Policy for the Promotion of Physical Activity

Less than half of schools had a written policy specifically for the promotion of physical activity (40.4%). With respect to this issue, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) small, medium and large schools, or (4) schools in the South, Midlands and North of England, or between (5) female and male PE HoDs, or (6) more and less experienced PE HoDs.

4.6.2 Physical Activities Accessible to All

Just less than two thirds of PE HoDs claimed to be offering a wide range of physical activities to all pupils (63.1%), a third claimed to be partially offering such a range (33.6%), whilst a very small proportion claimed that they were not offering a wide range (3.4%). More PE HoDs in large and medium-sized schools than in small schools considered that they offered a wide range of physical activities which were accessible to all ($p < 0.01$). Some differences were noted between PE HoDs in schools in different geographical areas with more PE HoDs in the Midlands than the South and North of England considering that they offered a wide range of physical activities which were accessible to all ($p < 0.05$). With respect to this issue, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or between (3) female and male PE HoDs, or (4) more and less experienced PE HoDs.

4.6.3 Pupils' Activity Levels

Well over half of PE HoDs (57.5%) stated that their department recorded pupils' activity levels (both within and outside of school). The percentage of non-respondents (10.2%) may have reflected some problems with interpretation of the question. With respect to recording pupils' activity levels, no significant differences were found between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) small, medium and large schools, or (4) schools in the South, Midlands and North of England, or between (5) female and male PE HoDs, or (6) more and less experienced PE HoDs.

Over a third of PE HoDs stated that they sometimes reported pupils' activity levels to parents either verbally or in a written report (38.9%), just less than a third stated that

they never did (32.6%), and just over a quarter stated that they always reported pupils' activity levels to parents (28.4%). PE HoDs in single sex schools reported activity levels to parents more than those in mixed sex schools ($p<0.05$). The percentage of non-respondents (11.1%) may have reflected some problems with interpretation of the question. With respect to reporting activity levels to parents whether verbally or in a written report, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) small, medium and large schools, or (3) schools in the South, Midlands and North of England, or between (4) female and male PE HoDs, or (5) more and less experienced PE HoDs.

4.6.4 PE Extra-Curricular Activities

PE extra-curricular activities were offered to pupils on a regular basis after school and at lunch times in nearly all secondary schools (Figure 4.18). Extra-curricular activities were offered at weekends in just over sixty per cent of schools and before school in just over a fifth of schools (Figure 4.18)

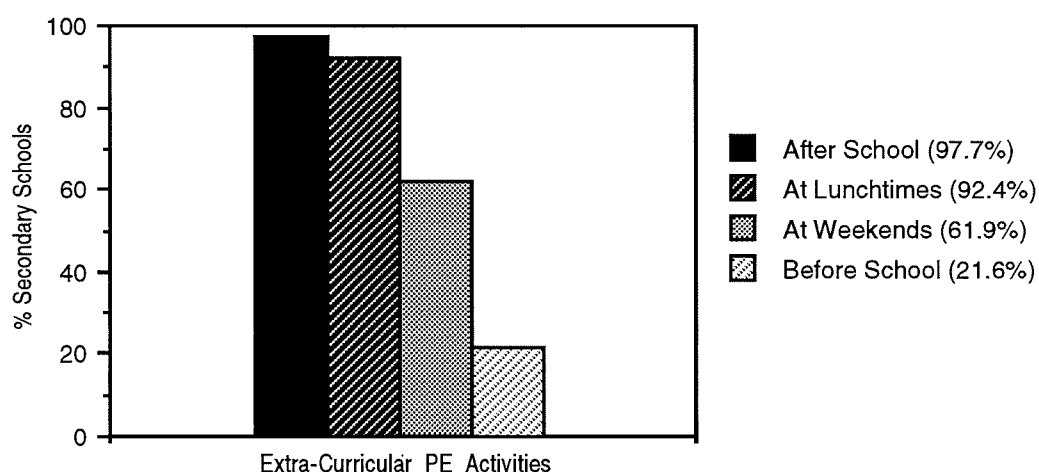


Figure 4.18 PE Extra-Curricular Activities in Secondary Schools

(N=706 (after school); 688 (at lunch times); 593 (at weekends) 537 (before school).

Extra-curricular activities at weekends ($p<0.0001$) and before school ($p<0.05$) were offered more in independent than state schools. Extra-curricular activities at weekends ($p<0.01$) were offered more in single than mixed sex schools. Lunch time ($p<0.01$) and weekend ($p<0.05$) extra-curricular activities were offered more in medium-sized and large schools than in small schools, and extra-curricular activities at weekends were offered more in the North than South of England, and more in the South than the Midlands ($p<0.05$). More male than female PE HoDs offered extra-curricular activities at weekends ($p<0.001$) and before school ($p<0.05$). There were

no significant differences between more and less experienced PE HoDs with respect to offering extra-curricular activities at specific times.

In an average week, PE HoDs spent just over seven hours on extra-curricular activities with pupils (Mean 433.64 minutes; SD 201.109; 7.2 hours). PE HoDs in both medium-sized and large schools spent more time on extra-curricular activities than those in small schools ($p<0.0001$). There were significant differences between female and male PE HoDs with the latter spending on average over an hour extra per week (7.8 hours) on extra-curricular activities than the former (6.4 hours) ($p<0.0001$). However, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) mixed and single sex schools, or (3) schools in the South, Midlands and North of England, or between (4) more and less experienced PE HoDs.

4.6.5 Categories of PE Extra-Curricular Activities

Nearly all secondary schools were offering inter-school 'friendly' games fixtures, games activities open to all abilities, inter-school games competitions, team training sessions for selected players and inter-house/tutor games competitions/fixtures (Table 4.14). Over three-quarters of secondary schools were offering exercise activities for pupils of all abilities, and just less than half were offering non-games competitions (inter-house/tutor/school), and inter-school non-competitive events or displays (Table 4.14).

Categories of PE Extra-Curricular Activities	n	%
Inter-school games fixtures (friendly)	704	98.3
Games activities open to all abilities	705	96.6
Inter-school games competitions (eg. league or knockout)	696	96.1
Team training sessions (for selected players)	689	93.3
Inter-house or inter-tutor games competitions/fixtures	691	90.6
Exercise activities open to all abilities	666	77.9
Inter-school non-games competitions (eg. gym, swimming)	620	46.1
Inter-house or inter-tutor non-games competitions	605	45.6
Inter-school non-competitive events or displays	623	42.5

Table 4.14 Categories of PE Extra-Curricular Activities in Secondary Schools

More independent than state schools offered inter-house/tutor non-games competitions and inter-school non-games competitions ($p<0.0001$), exercise activities open to all abilities ($p<0.01$), and team training sessions for selected players ($p<0.05$). However, more state than independent schools offered inter-school games

competitions (eg. league or knockout) ($p<0.0001$). More single than mixed sex schools offered inter-house/tutor non-games competitions ($p<0.001$) and inter-school non-games competitions ($p<0.01$). More PE HoDs in large than medium-sized and small schools offered inter-school games competitions ($p<0.01$), and games and exercise activities open to all abilities ($p<0.05$). However, more PE HoDs in small than medium-sized and large schools offered inter-house/tutor non-games competitions ($p<0.01$). Non-games competitions (whether inter-house, tutor or school) were offered more in schools in the South than the Midlands or the North of England ($p<0.05$) whilst inter-school non-competitive events or displays were offered more in schools in the Midlands than the South or North of England ($p<0.01$). Inter-school non-competitive events or displays were offered more by female than male PE HoDs ($p<0.001$). More experienced PE HoDs offered team training sessions for selected players than did less experienced PE HoDs ($p<0.001$).

4.6.6 Events Promoting Healthy Exercise

Just over a third of PE HoDs had organised events in 1992/93 or 1993/94 involving the promotion of healthy exercise (37.3%). More PE HoDs in single than mixed sex schools had organised such events ($p<0.05$). With respect to this issue, there were no significant differences between PE HoDs in (1) state and independent schools, or (2) small, medium and large schools, or (3) schools in the South, Midlands and North of England, or between (4) female and male PE HoDs, or (5) more and less experienced PE HoDs.

4.7 Section 6: Additional Comments

Letters accompanying completed questionnaires commented upon the time taken to complete it (one person specified over an hour) and included requests for a summary of the results. One PE HoD wrote: 'I like the general content of your enquiry as it makes a refreshing change when weighted against the extra-ordinary congested and confused rubbish that the vast majority of other efforts ask for!'. Another PE HoD apologised for sending the questionnaire in late and expressed the desire to 'say hello' as she was one of my ex-students at a previous higher education establishment.

A comment from a PE HoD relating specifically to HRE within the curriculum was that the department was pleased to have received a 'follow-up' questionnaire because now the head of boys' PE and the head of girls' PE could both complete separate questionnaires as 'with regard to some areas such as HRF, we have different approaches to some of our work. This may not be politically correct but it has been discussed at length, without agreement, and the situation remains'. In this particular

case, only data from the first questionnaire were included in the analysis. Gender issues in HRE are discussed in Chapter 7 (Section 5).

4.8 Section 7: Non-Respondents

For both the second pilot and the main survey, follow-up contact was pursued through telephone conversations with ten per cent of the non-respondents. The schools telephoned were randomly selected from a list of non-respondents. The telephone conversations were aimed at ascertaining the main reasons why the initial and follow-up questionnaires were not returned and establishing whether these non-responding schools differed from the responding schools in their approach to and provision of HRE. Selected questions from Section A and the HRE-focused part of Section C of the questionnaire were asked during the telephone conversations. With respect to both the pilot and main survey, the main reasons given for non-response included the following: busy time of year, heavy workload, illness/absence of the PE HoD, the initial questionnaire was not passed on by the headteacher, the questionnaire was lost within the PE department, the questionnaire was too long, and added to the increasing amount of paperwork which teachers were having to deal with in schools. No clear differences emerged between the responding and non-responding schools with respect to their approaches to and provision of HRE (in terms of the degree of structure, the mode of organisation, and the theoretical and practical content).

4.9 Summary

With respect to attitudes and views towards HRE in the NCPE, most PE HoDs were positive about the inclusion of HRE, and just over half thought that HRE should have been an activity area. Most considered the HRE specific requirements to be important and relevant but views varied regarding interpretation, assessment and the organisation of HRE, particularly at KS four. The majority of PE HoDs had a written scheme of work for HRE, and just under a third had introduced HRE or increased its input since the introduction of the NCPE. However, less than a third of PE HoDs described the current organisation of the teaching of HRE as fully structured, and over half described it as partially structured.

Most PE HoDs were teaching HRE through the PE activity areas, over three quarters were teaching HRE in discrete units in PE, and well over half were teaching HRE partly in PE in addition to elsewhere in the curriculum. The most common method of delivery adopted by just over a third of schools was a combination of approaches involving discrete units in PE, integration through the PE activity areas, and within other areas of the school curriculum. HRE was reported to be delivered through all six of the NCPE activity areas, although just less than half of PE HoDs claimed to be

teaching HRE in a structured way through athletics, and just over a third claimed to be doing so through games and gymnastics. Just less than sixty per cent of schools had compulsory HRE units at KS three. Just over a third of schools had compulsory, and just over a fifth had optional, HRE units at KS four. Virtually all HRE units were compulsory for years seven to nine, for over three quarters of year ten, and for over half of year eleven. Just over half of schools had HRE units comprising a mixture of activity-based and theme-based work, and just over a third had activity-based HRE units. The vast majority of schools had predominantly practical HRE units. The time allocation and the gender groupings for HRE units were variable. The majority of HRE units were delivered during the Autumn and/or Spring Terms. In most schools, HRE was taught by all members of the PE department, and in almost a third of schools, it was also taught by staff from other departments.

Terminology for the 'health and fitness' area varied, the most commonly used terms being 'health-related fitness' (HRF), 'fitness' and 'health-related exercise' (HRE). Nearly all HRE programmes included work on stamina, suppleness and strength. Just less than half of schools included exercise programming, less than a third incorporated issues relating to weight management, and only a fifth included relaxation and stress management within their PE programmes. Just less than two-thirds of schools included fitness testing. Compulsory fitness testing took place in almost half of schools for years seven to nine, just over a third for year ten, and just under a quarter for year eleven. The most commonly-employed fitness tests were a time/distance run, the Multi-Stage Fitness Test, a 'sit and reach' flexibility test, sit ups/curl ups, a step test and push ups. Almost a fifth of schools also included skill-related fitness tests. Pupils' fitness levels or scores were rarely reported to parents.

Most schools offered a variety of health-related activities within the curriculum. More than half of schools included compulsory cross-country running and circuit training, over a third included aerobics, about a quarter included skipping and jogging, and about a fifth included weight training using fixed weights. Just less than half of schools offered optional aerobics, just over a third offered weight training using fixed weights, about a quarter offered circuit training, and just over a fifth of schools offered cross-country running and weight training using free weights. Within the extra-curricular programme, over a third of schools offered cross-country running and aerobics, just over a quarter offered weight training using fixed weights, and about a fifth offered circuit training, weight training using free weights, and jogging. Few schools offered water exercise or step aerobics within their curricular or extra-curricular programmes.

Limited liaison with HE co-ordinators was evident in well over a third of schools, and in just less than a fifth there was no designated HE co-ordinator. Liaison with feeder primary schools was also limited, with over a quarter of PE HoDs not being aware of whether any HRE was included within their feeder school PE curricula. However, about half of PE HoDs considered that some of their feeder schools included health-related work. Less than a third of PE HoDs had not received any HRE INSET in the previous two years, and the vast majority considered that some or all of their staff needed it. Over a third of PE HoDs considered HRE to be a priority INSET need. Just over half of PE HoDs were aware of the existence of the HEA Health and PE Project (HPEP). A range of HRE texts were used in secondary schools with about a quarter of schools using HPEP Newsletters, 'Fitness for Life', 'HRF in PE' and 'Action for Heart Health'. The most commonly used HRE resources were commercially produced posters/charts, 'home-made' work cards/sheets, heart rate/pulse monitors, skinfold calipers, and weighing scales. Very few PE HoDs were using health and fitness related computer software with pupils in curriculum time.

With respect to the promotion of physical activity, less than half of schools had a written policy specifically on this issue. However, just less than two thirds of PE HoDs claimed to be offering a wide range of physical activities to all pupils. PE extra-curricular activities were available after school and at lunch times in nearly all secondary schools, and in an average week, PE HoDs were involved for over seven hours. Extra-curricular activities were also offered at weekends in just over sixty per cent of schools and before school in just over a fifth of schools. Nearly all secondary schools offered inter-school 'friendly' games fixtures, games activities open to all abilities, inter-school games competitions, team training sessions for selected players, and inter-house/tutor games competitions/fixtures, and over three-quarters offered exercise activities for pupils of all abilities. However, non-games competitions and events were offered in just less than half of secondary schools. Just over a third of PE HoDs had organised events within the previous two years involving the promotion of healthy exercise.

Some differences were recorded in the views, approaches and practices relating to HRE between PE HoDs in state and independent schools, mixed and single sex schools, and schools of varying sizes and in different parts of England. Furthermore, some differences in views, approaches and practices were also evident between female and male PE HoDs, and between those with varying years experience as PE HoD.

Chapter 5: Case Study Method

5.1 Introduction

As previously explained in Chapter 3, in order to achieve the overall aim and specific objectives of the research, the design involved the integration of qualitative and quantitative methods. Following the administration and analysis of survey methods, the next phase of the research design involved case studies. The purpose of this Chapter is to justify and describe the case study methodology. The Chapter is presented in five main sections: (1) case study procedures, (2) case study sample, (3) case study process, (4) case study data analysis, and (5) case study costs.

A timetable of the case study research is presented in Table 5.1 to illustrate that this phase of the study was continuous and ongoing despite the fact that, as part-time research, it spanned a period of just over two years (1995-97).

Dates	Research Processes and Procedures
January - February 1995	Development of case study interview schedules.
March - April 1995	Identification of case study schools.
June 1995	Negotiation of access to case study schools.
July 1995	Case studies conducted.
August - December 1995	Case study data analysis.
January - September 1996	Reporting of case study findings.
October '96 - September '97	Writing up of PhD research.
1997-98	Further publications of research findings.

Table 5.1 Case Study Research Timetable

5.2 Section 1: Case Study Procedures

5.2.1 Selection and Justification

In the light of the survey findings, which revealed considerable variation in responses to questions addressing HRE, closer investigation of schools and PE departments was clearly necessary to pursue on the one hand what underlay the different attitudes and approaches of PE HoDs towards 'health' within the NCPE and, on the other, how different reactions were reflected in 'policy' and 'practice' in schools. Whilst the survey data provided the basis from which to begin to describe the approach to and provision of HRE within the curriculum in secondary schools, it became evident that identifying factors which might influence the variations in provision involved moving beyond simple correlations to closer exploration of highly complex relationships.

Case studies provided the means by which issues raised by the questionnaire survey could be further explored. A case study approach, defined by Burgess as a 'condensed field experience' (1984a, p. 2) is considered appropriate for in-depth understanding of particular phenomena (Hitchcock & Hughes, 1995; Yin, 1984). Thus, the case studies aimed to provide further insight into teachers' perspectives on HRE within the NCPE in terms of their views, approaches and practices, and closer exploration of the factors influencing the approach to and provision of HRE in state secondary schools.

The case study data was collected through:

- (a) focused interviews with key individuals such as the PE HoD, PE colleagues, and the individual(s) responsible for HE, and
- (b) written documentation from the school such as policy statements, schemes and units of work, lesson plans, and teaching resources.

The direct interaction involved in interviewing is the source of both its strength in allowing for access to detailed data, and its limitation in being prone to subjectivity and bias on the part of the interviewer. Once the purpose of the interview was established, broad aims and specific objectives were determined. These objectives were then translated into questions within an interview schedule (see Appendix H). The content of the interview schedule was informed by an ongoing review of relevant literature, empirical data from the survey research, and prevailing theories.

5.2.2 Validity and Reliability

Validity was assisted through probability sampling (see 5.2.3) and through careful formulation of the interview schedule ensuring that questions were clear and easily understood. Further, as the interviewer and thus acting as a data collection instrument, it was critical that I personally was aware of potential problems relating to my own biases, opinions, or curiosity which might have affected my behaviour as an interviewer. The interview schedule was commented upon by professional colleagues and teachers prior to piloting it with six PE teachers (four of them PE HoDs). Case study interview transcripts were read and commented on by professional colleagues. Reliability was further addressed by conducting the research as though being watched and by following an established case study protocol such that it would be possible for the procedures to be repeated in the same way.

The view of some researchers, that every interpersonal situation may be said to be valid is of course acknowledged (Cohen & Manion, 1994). Indeed, it appears that a continuum of positions exists between researchers from those wanting to retain the

criteria of validity and reliability, but re-define them in line with qualitative aims of enquiry, to others who would prefer to abandon such criteria for qualitative enquiry (Hitchcock & Hughes, 1995).

5.3 Section 2: Case Study Sample

Within this research project, a 'case' was a secondary school. In selecting the cases, the following factors were considered: school type, age range, number and gender of pupils, and gender and teaching experience of the PE HoD. These factors were selected as the survey findings indicated that they influenced the approaches to and mode of implementation of HRE within secondary schools. It was decided to select schools for the case studies which were:

- (a) in the state sector (as opposed to the independent sector)
- (b) mixed sex (as opposed to single sex)
- (c) delivering both KS three and four (as opposed to KS three or KS four only).

These decisions were made because the NC was a requirement for schools in the state sector only and the research focus was very much on how this requirement was being viewed and implemented within the curriculum. Furthermore, most schools in the state sector are mixed sex and it seemed prudent to focus on typical rather than atypical schools. Finally, the research involved exploring the implementation of HRE at both KS three and four and it was therefore considered desirable that the selected schools should be addressing both KS. Schools which fulfilled the above three criteria formed a sub-sample of schools from which the case study schools were selected. Further, given that the survey findings suggested some variation in approach to HRE in different areas of the country, it was decided to select one school from the South, the Midlands and the North of England. Thus, the final selection included one mixed sex state school (delivering both KS three and four) from each of the South, Midlands and North of England. Initially, it was also hoped that the school selections might incorporate a mix of male and female PE HoDs and schools of different sizes (in terms of pupil numbers). However, it became increasingly evident that the selection criteria was becoming unnecessarily over-complex and thus it was decided to proceed with the stratified selection procedure at this stage.

A random selection procedure was used to select up to fifteen mixed sex state secondary schools delivering both KS three and four (i.e. five schools from each of the three areas in England: South, Midlands and North). The random sampling technique took place on 9th June 1995 and was witnessed and approved by a university colleague. The school numbers were recorded in the order in which they

were drawn. Letters (Appendix A) were sent on the same day to the first three randomly selected schools, one each in the South, Midlands and North of England. A negative response was received from the school in the South of England on 14th June 1995, the reason for declining to be involved being that the headteacher felt that the school was too busy to be involved in research. A letter was thus sent to the second randomly selected school in the South of England on 14th June 1995. Numerous follow up phone calls were made two to three weeks after receipt of the initial letters to establish the willingness or otherwise of the schools to be involved in the research. The school in the Midlands agreed to be involved and telephone conversations took place with the PE HoD to confirm suitable dates to visit the school. The school in the North declined the invitation to be involved, the reason being that the PE HoD was on long-term sick leave and the second in department was about to retire. A letter was therefore sent to the second randomly selected school in the North of England on 27th June 1995. This school accepted the invitation to be involved and dates were duly agreed for the case study research to take place during July 1995. The second randomly selected school in the South of England declined the offer of being involved (no explanation was given) and a letter was sent to the third randomly selected school in the South of England on 27th June 1995. This school accepted the offer to be involved and mutually acceptable dates were set for the case study research to take place during July 1995.

5.4 Section 3: Case Study Process

For each of the three schools, the researcher made an initial visit followed by another visit of two full days in July 1995 during which the PE HoD and all colleagues teaching PE were individually interviewed. Although guided by the semi-structured interview schedule, there was also flexibility with respect to the issues pursued and individuals included in the investigations. In total, ten PE teachers were interviewed including two PE HoDs and one male teacher who had just been appointed PE HoD for September 1995. The intention was to also interview the HE co-ordinator in the school. In two of the three schools, however, this post did not exist as such, and in the third school, one of the PE teachers carried this additional responsibility. Each interview took place in a suitably quiet room in the school building, lasted from forty to ninety minutes, and was recorded with the assent of the respondents, and later transcribed. At each school, the PE HoD was interviewed several times, initially to obtain contextual information about the school, the PE department, the PE curriculum and the NCPE, and beyond that to focus on health-related aspects of the PE programme. In one school, a recently appointed PE teacher (who was due to commence teaching in September 1995) was visiting the school on the day and the opportunity was taken to interview this individual.

Accompanying field notes were made during and after the visits and documentary material was collected in the form of schemes of work and a HRF booklet. During and following the visits, it was possible to refer to the previously-completed questionnaire and to record any discrepancies or changes. The field notes reveal the reality of a tired, somewhat stressed and initially nervous researcher, myself, who gradually gained in confidence with each interview. Interviewing was a much more active process than I had imagined and one which certainly requires an alert mind. Comments were noted about the friendliness and co-operation of most staff although I was aware of one or two teachers who frequently paused before responding and seemed a little defensive in their approach. I was also aware of my own empathy with the teachers (especially as it was close to the end of the term and the school year) and recognised early on that I was tending to extract information discretely rather than via more direct and challenging questions. The first case study seemed more problematic than the others partly because of my relative inexperience as a researcher and also because I had taught for twelve years in the same county and felt too close to the situation for comfort. Indeed, the situation arose in interviews and informal conversations where the PE staff were talking about me without knowing it (one teacher referred to me as 'someone who was just making a name for themselves'). I felt like an 'undercover agent' at the school and experienced a range of feelings including guilt, embarrassment and empathy. Only when I had left the school premises, could I relax and appreciate the more humorous side of the situation. The second and third case studies proved to be less problematic and I found the interview situation much easier. However, the situation again arose during the second case study in which comments were made about texts and INSET courses which I had been involved with writing or delivering. However, this time the comments were generally complimentary and I found the situation somewhat amusing. The 'checks' on the previously-completed questionnaires were reassuring in that the information provided corresponded and gave me faith in the validity and reliability of the survey method. Overall, it was found that the case study contexts were different and wide-ranging and provided an invaluable insight into the complexity of the teaching situation.

5.5 Section 4: Case Study Data Analysis

The focus of analysis was the progressive identification of themes, categories and concepts underpinning the implementation of HRE in the NC. Data analysis was '...a process of making sense, of finding and making a structure in the data and giving this meaning and significance...' (Jones, 1985, p. 263). Analysis of the interview data involved a series of stages, the first being to listen to the tapes and read the transcriptions several times in order to provide a context for the emergence of specific

units of meaning and themes. The next stage involved delineating units of meaning relevant to the research question followed by clustering of these units and determination of themes from the clusters of meaning. The final stage involved the identification of general and unique themes from all the interview data followed by contextualisation of the themes.

Data has been coded to maintain anonymity of schools and individual PE teachers. The codes detail the school (A, B or C), the gender of the PE teacher (M or F), the specific PE teacher (1 or 2), the cassette tape number (1-10), the cassette side (A or B) and the location number on the cassette. Thus, the code CM1:7A200 indicates that the text relates to school C's male PE HoD and can be found on the seventh cassette tape, side A, location 200. The codes for the individual PE teachers are detailed within Table 5.2. School code letters are used throughout the text to enable cross-referencing of the material presented.

	School A	School B	School C
Male PE HoD	AM1	BM1	CM1
Female PE Teacher (overseeing girls' PE)	AF1	BF1	CF1
Male PE Teacher	-	BM2	CM2
Female PE Teacher	AF2	-	CF2

Table 5.2 Codes for Individual PE Teachers

The NUD.IST (non-numerical unstructured data indexing, searching and theorising) (1985) computer software package was used initially to organise and provide a structure for the data through the use of text searching tools. The results of the case study research are presented in Chapter 6.

5.6 Section 5: Case Study Costs

The total costs of the case study research amounted to £1136.35. These costs included: travel, accommodation and subsistence, telephone calls and cassette tapes, and secretarial assistance in transcribing. Funding to support the case study research was obtained from the research committee of the Department of Physical Education, Sports Science and Recreation Management at Loughborough University (£1136.35).

Chapter 6: Case Study Results

6.1 Introduction

The case studies portrayed informative pictures of the expression of health in PE. However, the constraints of space mean that the data presented are necessarily selective. Other work has drawn on the case study data (see pages xiii-xiv) and the intention is that this data will be the subject of further publications and conference presentations. Within the text of this Chapter, respondents' contributions have been coded (see Chapter 5, Section 4, 5.5) and terms and phrases used by individual teachers are placed within single quotation marks. Excerpts from each of the interviews are presented in Appendix I. Following visits to the three schools, school profiles were compiled. These are presented in Appendix J and provide a description of the varying contexts for the case studies, including information about the school, the PE department, the PE curriculum, and PE teachers' views of and responses to the NCPE.

Within this Chapter, data are presented which reflect the place and expression of HRE within each of the three case study schools A, B and C. The data describe policy and practice and provide information about the support structure for HRE in addition to activities 'beyond the curriculum'. The Chapter is presented in five main sections: (1) the place and expression of HRE in school A, (2) the place and expression of HRE in school B, (3) the place and expression of HRE in school C, (4) documentation, and (5) further analysis. This is followed by a summary of the place and expression of HRE in all three case study schools.

6.2 Section 1: The Place and Expression of HRE in School A

6.2.1 Health-Related Policies

The school's approach to health was portrayed as lacking importance and described as 'low key' and limited in its structure (AF1:3A191). HE was embraced within a personal and social development (PSD) pastoral programme which had its own co-ordinator who liaised with each of the heads of year. However, there was no designated HE co-ordinator at the school. The PSD programme for year seven included some HRF in the form of information packs, questionnaires and a 'one-off' lesson on fitness testing which was organised and delivered by one of the female PE teachers. The course also included some discussion of balanced eating plans. The HRF input was designed by one of the female PE teachers. However, she and her colleagues were unaware of how or whether this aspect was developed in later years.

The year ten Diploma in Vocational Education (DOVE) programme included a 'fitness' element which had been designed by the PE HoD and involved activity surveys, fitness testing, and the setting up of norms. The PE staff were aware that some fitness work was also covered in science with 'pupils performing tests up and down on benches' (AF1:3A111; AM1:1B788). In addition, a 'healthy lifestyle' caravan visited the school each year but, as far as the PE HoD was aware, there were no specific planned links with the curriculum. It was explained that one of the school aims was to look at cross-curricular issues and to 'tie things up' since a recognised weakness was that 'everything is done separately', in 'bits' (AF1:3A111).

One of the female PE teachers expressed the view that HRF lacked prominence in the NCPE, and stated that the PE department covered the HRE requirements at KS three as the NCPE did not stipulate how much depth was required (AF1:3A179). However, in her opinion, the health-related area was 'very important', especially as she perceived the health of many children at age eleven to be poor. There was no specific scheme of work for HRE and the PE HoD considered this to be an area that needed addressing. Although it was thought that some HRE might be found within the schemes of work for the activity areas, it was felt that more could be included (AM1:1B684;800). The PE HoD's view was that HRE could be delivered in 'normal' lessons but recognised that this had not been done to the extent 'that it should have been' (AM1:2A3). The PE HoD was unsure about how his female PE colleagues were delivering HRE in 'normal' lessons (AM1:1B647-659). There was limited communication on the issue of health-related PE within the department, indeed it had not been discussed in department meetings for about three years, and each PE teacher addressed it in their 'own way' (AM1:1B647; AF1:3A107; AF2:2B269).

A female PE teacher claimed that health-related work was 'not fitted in' apart from warming up and talking about the effects of exercise on the body in games lessons (AF1:3A95). She stated that she 'personally talks off the top of my head where it arises' and described the PE department's approach as 'hit and miss' explaining that the department's priorities tended to be the teaching of activities such as games, swimming and gymnastics (AF1:3A115). She explained that the boys' HRF programme had been introduced when there was more PE time and staff but that this was 'crashed' the following year when PE time was reduced because it was seen as a 'fringe aspect' of PE, 'second in people's minds' (AF1:3A91). The second female PE teacher explained that a HRF block was organised for the girls three or four years previously but it was no longer delivered as the female staff considered that the girls were 'missing out' and would benefit more from 'fully practical lessons' rather than 'sitting down and writing about it and watching videos' (AF2:2B277). However, she

recognised that the problems encountered may have been due to the way in which the HRF block had been delivered.

The PE HoD considered that the future approach to HRE should be a department decision and recognised that some of his colleagues might want an annual HRE block which progressed through the years. He personally favoured a permeation approach to the organisation of HRE in the NCPE but recognised that their current approach was 'ad hoc', merely 'dabbling' and required greater organisation (AM1:1B800). One of the female PE teachers considered that the most effective way of delivering HRF was through a continuous programme of six week blocks each year, building continuity through the years. She viewed this as feasible because the PE curriculum currently comprised a 'great percentage of games' (AF1:3A131).

6.2.2 Health-Related Practices

The PE HoD used the term 'fitness' for the health-related work whilst the female PE teachers referred to 'health-related fitness' (HRF)¹. The PE HoD explained that HRE was currently taught through the activity areas although several years previously there had been a six week block of HRE for year seven and eight boys which included fitness testing. Pupils in years ten and eleven could opt for a six-week fitness course based at a local university. This option required payment which was viewed as a limitation by one of the female PE teachers who stated that only a small number of pupils would be prepared to pay. The fitness option was organised in single sex groups and involved pupils being supervised by university staff in the safe use of weights machines. A further option for girls was aerobics which was viewed by the PE HoD as lacking structure and thus of questionable worth (AM1:1B728). A female PE teacher explained that the 'non-gamesy' pupils brought in and followed exercise videos by themselves. She considered that any form of exercise was 'better than nothing' and was of the opinion that the girls would otherwise 'be sat out with an excuse note' (AF1:3A175). The female PE teachers mentioned a 'one-off' step aerobics lesson for the girls taken by a member of the university staff (AF1:3A171) which had been well-received although the take-up had been low (AF2:2B313). One female PE teacher stated that currently health-related work was included in swimming and cross-country running lessons (AF2:2B241). The second female PE teacher mentioned incorporating circuit-type work into games or gymnastics lessons in the

¹ Although health-related exercise (HRE) was the term adopted within the NC for the area of work associated with health and fitness, the term health-related fitness (HRF) was also commonly employed with reference to this area (see Chapter 2, Section 5, 2.6.3). Within this particular Chapter, the terminology reported is that which was employed by the individual teacher being interviewed.

lower school and discussing whether exercises were for strength or flexibility, and for which parts of the body the exercises were intended (AF1:3A179).

In terms of a knowledge base associated with the area, the PE HoD referred to warming up, stamina, flexibility, diet, and a healthy lifestyle. A female PE teacher made reference to 'general, basic' information about the effects of exercise on the body such as what happens to the heart rate during exercise and recovery. In addition to stamina, she stated that flexibility work was covered in warm ups. However, apart from some strength work in swimming, she considered that perhaps more strength work could be included (AF2:2B329). One female PE teacher claimed that non-participants were often given health-related work (AF2:2B241) and both female PE teachers stated that when the pool was out of action, the pupils were taught about water safety and first aid (AF2:2B241) and watched 'health' videos (AF1:3A115).

The PE HoD stated that some work on designing exercise programmes was covered at KS four but suggested a weakness in that 'if you asked to see it in writing you would struggle to find it' (AM1:2A37). However, one of the female PE teachers claimed that nothing was included in the curriculum with respect to individual exercise programmes (AF1:3A183), or the role of activity in weight management (AF1:3A191). Indeed, the second female PE teacher had previously attended a course on the former subject and considered the topic to be 'quite involved and very time-consuming' (AF2:2B333). It was mentioned that in previous years, when a member of the information technology department was teaching some PE, the pupils were involved in planning a fitness programme with a partner and then inputting the programme onto a computer. This approach was considered 'totally different' from focusing on activity only and one which had 'enormous' benefits for the pupils (AF1:3A183). However, it was described as a 'flash in the pan', only possible because of the member of staff's involvement (AF1:3A183). The PE HoD recognised that assessment of HRF was an area that needed 'looking into' at KS three and four (AM1:2A41).

6.2.3 The Support Structure

No specific health and fitness texts were used to support the teaching of HRE. The only resources mentioned were some 'home-made' worksheets and the programme used to develop the previous HRF course which was obtained by post from Nottingham and comprised charts, exercises, and fitness tests (AF1:3A95). PE staff had received no specific advice from PE advisers and inspectors regarding HRE. However, one of the female PE teachers recalled the PE inspector mentioning several years previously that a PE teacher from the county had been seconded to

Loughborough University to look into HRF and to help produce a HRF document for the county². She said that 'HRF was a big thing' some years back but it had since 'died a death' (AF1:3A95). She commented that initiatives 'come according to personalities' and stated that 'we've been round many bends and that many corners' (AF1:3A99). None of the three PE staff were aware of what other PE teachers in the area were doing in terms of HRE. One female PE teacher stated that 'nobody actually talks about HRF' (AF1:3A135). Two of the three PE teachers were aware of recent reports in the local media about an initiative in a nearby secondary school where the female PE HoD, who was concerned about children's health and fitness levels, had designed an activity programme for pupils in the school's feeder primary schools (AM1:2A15-23; AF1:3A135-139). The female PE teacher claimed that the same school had a fitness suite and used to deliver fitness work but no longer did (AF1:3A135).

6.2.4 Beyond the Curriculum

The PE HoD considered that more children were becoming 'lazy' and 'overweight' and stated 'you can just see how over the years they have changed' (AM1:2A45-49). He considered that PE had a role to play in improving children's health but that it was too late by the time they had reached secondary school, and furthermore there were not enough teachers assisting with extra-curricular activities (AM1:2A49). A female PE teacher suspected that most pupils were inactive outside of school and she had noticed an increase in the number of pupils suffering from asthma and using inhalers. Her view was that children were less healthy now and considered that 'quite a number' of the pupils would be involved in drinking alcohol and glue-sniffing outside of school. In response to concerns about children's health, she stated that the PE staff had tried to 'push the fitness side', particularly in swimming lessons, such as swimming non-stop for a length of time (AF2:2B445). Another female PE teacher claimed that the male and female staff within the department communicated little on such policy issues, and explained that the department comprised two young men who focused more on skill development and their teams, and two older women who had become more aware of a 'general teaching approach towards the kids' (AF1:3A203-207). She commented that pupils who were overweight or smokers or drinkers were encouraged, not pushed, into

²The 'PE teacher from the county that had been seconded to look into HRF' was myself. I received funding from Staffordshire LEA for a one year full-time secondment during the academic year 1986-87, during which I completed an MA in Physical Education at the University of Birmingham. My dissertation subject for the master's degree was 'the development of health-based physical education in and around Staffordshire'. It was as a consequence of this work, in addition to a further two-term one-day-a-week secondment (January to July 1988) to Loughborough University (funded by the 'Exercise and Health' group at this institution and agreed by my headteacher and LEA), that I was in a position to make a major contribution to a Staffordshire LEA publication entitled 'Fitness for Life' which was published in March 1989.

doing more activity. She considered that children's activity and fitness levels had declined partly due to the lack of PE expertise in junior schools, and stated 'gone are the days when I could send the kids on cross-country and not have to worry...I go round in my car now and pick up the ones who are dying...' (AF1:3A199). However, she went on to comment that the activity levels of some of the pupils outside of school were quite high with some playing for the local netball, rugby, and football clubs. She stated that she was pleased to know that activities were 'carried on' such as when girls informed her that they were doing 'aerobics and things like this' and when she saw them at the local university fitness centre (AF1:3A247).

The PE HoD considered that the PE department had 'quite a good' reputation within the county in terms of extra-curricular sport, particularly boys' football, volleyball, and rugby, in addition to girls' hockey (AM1:1A307). PE extra-curricular activities took place at lunch time and after school every day and the PE HoD was involved in these during three to four lunch times and five nights per week. PE extra-curricular activities for the girls mainly comprised lunch time clubs as the female PE staff had found that after-school activities were not well attended because of the 'bussing' problem (AF2:2B417). Very few weekend activities took place for the girls. One of the female PE teachers was involved in extra-curricular activities every lunch time but, according to the PE HoD, her involvement after-school was limited due to family commitments (AM1:1A267). However, she considered that she and the other female PE teacher 'covered everything that needed to be covered', one being responsible for after-school tournaments and the other for league fixtures (AF1:3A223). As one of the female PE teachers was a head of year, her after-school commitment was limited and she was unable to run lunch time clubs (AF1:3A223). A female PE teacher described the PE extra-curricular programme over the years as 'booming' but felt that this had not been recognised or appreciated as much as it should have been by senior staff. She also commented on changes which had been 'forced' upon them such as the abandonment of the house system which meant that PE house activities and sports days no longer took place (AF1:3A87). She was irritated by media coverage regarding the decline of school sport because in her opinion 'that's totally untrue' (AF1:3A227). She did not consider the suggestion to teach more team games as providing the answer because 'there's nothing but team games', indeed the latter are 'flourishing in ninety-nine per cent of schools around here' (AF1:3A227).

Due to time limitations, most of the PE staff's extra-curricular time was taken up dealing with school teams (AM1:1A263). The lunch time activities for the girls mainly comprised team practices although there were also 'open-access' badminton and trampolining clubs (AF2:2B433), the emphasis in the latter clubs being on 'fun'

without any 'pressure' (AF1:3A215). A female PE teacher considered that the boys' extra-curricular activities were 'more geared towards teams' whilst the girls' extra-curricular activities were 'for anybody to come and enjoy' (AF1:3A215-219). Many non-games orientated pupils attended a 'leisure swim' at lunch times. A female PE teacher considered that there was a 'vast amount going on for kids' whether they were 'sporty or not' (AF1:3A219). The PE HoD thought that the frequency and choice of extra-curricular activities was greater for boys than girls partly due to the fact that the female PE staff had to attend to their own families (AM1:1A267). All PE teachers considered that they needed more staff to help with extra-curricular activities. The PE HoD was of the opinion that because there were 'too few' staff running extra-curricular activities, those who were involved were 'spreading themselves too thinly' (AM1:2A81-85).

6.3 Section 2: The Place and Expression of HRE in School B

6.3.1 Health-Related Policies

The PE HoD explained that the deputy headteacher in charge of the curriculum was responsible for cross-curricular issues (BM1:6A87). However, the male PE teacher claimed that heads of year were responsible for HE (BM2:5B523) and the female PE teacher was unsure as to who was responsible (BF1:5A315). The PE HoD had recommended a few years back that there should be a HE co-ordinator (BM1:6A99) and commented that the school as a whole did not deliver the 'whole health message terribly well' (BM1:6A135). All PE staff were aware that exercise was a topic included in the 'healthy living' component of the year seven and eight social education (SE) course but were not aware of the SE programme for any of the other year groups. The PE HoD was not 'happy' with the delivery of the SE programme. He considered that teachers delivering it should be good role models and he expressed concern about the 'kind of messages' that were portrayed to pupils when the course was delivered by teachers who were old, overweight, unfit, and smokers and drinkers (BM1:6A83). The male PE teacher stated that there were no planned links with the PE department's HRF course and considered that the staff responsible for the SE course should liaise with the PE department regarding the HRF blocks. Indeed, both he and the PE HoD thought that the two courses could link 'very well' (BM2:5B515). He explained that the heads of year did not ask about what was in the PE curriculum, neither did the science teachers who included some teaching about heart rates in their lessons. This lack of consultation irritated the PE HoD who described the situation as 'not that well' co-ordinated and suggested that pupils could do virtually the same lesson in PE, science, and SE (BM1:6A99).

It was claimed that all staff in the PE department gave high priority to HRE and viewed it 'very positively' (BF1:5A175). The female PE teacher considered it to be especially important that year ten and eleven pupils had a positive approach to physical activity in order for them to continue activity out of school and to take some responsibility for their own health. The male PE teacher thought it important that children understood why exercise was good for them and were aware of the links with heart disease (BM2:5B587). As a result of the NC, the PE department had tried to change the emphasis away from team sport to make it more fitness-based, as the PE staff considered that fitness linked all the components of the NCPE (BM2:5B459). The PE HoD stated that, in his day, there was 'no overall plan of what PE was', no bringing together of 'sport and PE and recreation and a healthy lifestyle' (BM1:6A71). It was also the department's view that many pupils had been 'turned away from sport' so they attempted to make PE more enjoyable and fun in order to 'get the kids back on your side' (BM2:5B459). The PE department had discussed the approach to teaching HRE and had agreed to 'highlight the main ideas behind HRF' in a block and to 'filter through' the ideas in other lessons (BF1:5A219). Both the male and female PE teachers stated that once pupils were given an 'initial input' and had covered the 'basics' in a block, it was easier to transfer and 'take it into' other sports and activities (BM2:5B479; BF1:5A219).

The PE HoD did not want to see HRE as a separate activity area within the NCPE as he considered that it was best delivered through the other activity areas. However, he stated that this provision had to be planned as one could not expect it to be delivered just as a matter of course (BM1:6A179). It needed to be led so that children understood why they were doing what they were doing, what they needed in order to improve, and how their exercise patterns were affecting their lifestyle. He suggested several possible reasons why HRE was not granted the status of an activity area including time constraints, or that it was a relatively new curriculum area that did not fit into the competitive games model, or that it was a new area for old PE teachers in that it was introduced into colleges a few years ago and all new PE teachers were coming out with information on HRE and the old 'die-hards' were saying 'forget that' (BM1:6A183). The female PE teacher did not wish to see HRE as a separate activity area as she was of the view that it was best filtered through the current PE curriculum to avoid pupils viewing it as separate and not linking the two areas (BF1:5A291). However, she explained that, although it was filtered through the PE lessons, 'it's handy to have a block because it simplifies the situation' in that the content of the HRF block supports the other lessons (BF1:5A295). Without a HRF block, she considered that within a six week block of games, it would be necessary to spend three lessons on health-related matters. The male PE teacher was of the opinion that

HRE should have been an activity area because, as it stands, it is possible to 'get by without really teaching it, which is the problem with the cross-curricular type themes' (BM2:5B591). He considered that 'unless it is specifically laid out, you don't necessarily have to pay much attention to it' (BM2:5B591). His preference was for a separate block in addition to teaching HRE through the other PE activities (BM2:5B591).

The male PE teacher explained that there was a written scheme of work for HRE for years seven and eight. The female PE teacher stated that schemes of work included HRE but allowed for individual approaches, for example the exercises and activities were delivered slightly differently by staff. The PE HoD considered that HRE work was 'done quite well given the time constraints' within the PE department (BM1:6A135). He stated that the teaching of HRE was 'less structured' in years ten and eleven although all staff knew that it was an 'integral part of the way they teach their lessons' (BM1:6A39).

6.3.2 Health-Related Practices

The PE HoD used the term 'health-related exercise' (HRE) but the other PE staff referred to 'health-related fitness' (HRF). The HRF programme in the PE curriculum took the form of a half-term block for years seven to nine. The PE HoD described the HRF blocks as four or five lessons per year in which pupils were involved in a 'bit of paperwork' (for example learning what happens to their pulse when they exercise) and 'these ideas' were 'kept running through' other lessons such as 'fitness requirements for different events' and 'getting themselves prepared for every lesson' (BM1:6A7). He explained that, by year nine, pupils should be able to 'take responsibility for their own short warm up'. He added that the department could not 'give ten weeks over to HRE' but could manage four weeks and then 'take it through other areas' to bring the 'whole thing together' (for example, pupils learning that the heart rate should be slightly higher after the warm up, or taking a pulse during a ball skills lesson) (BM1:6A11). The HRF blocks were introduced because it was thought important that there was 'a real focus on it right at the beginning' and the PE HoD was of the opinion that if they had 'tried to do it alongside, it would have got lost' (BM1:6A15).

There were no HRF blocks for years ten and eleven although it was pointed out that over a quarter of all pupils were following a GCSE PE programme which covered HRF in depth (BM2:5B471). The male PE teacher acknowledged the need to focus more on the KS four programme. It was explained that year ten and eleven pupils took more responsibility in lessons and tried different activities which included aerobics and step aerobics delivered by a qualified aerobics teacher (the art and

science teacher). The girls opted for these activities but the boys 'didn't want to have anything to do with it' (BF1:5A187). In the aerobics block, pupils were involved in developing their own steps and routines, and in learning about pulse rates and the FITT (an acronym for frequency, intensity, time and type) principle. The female PE teacher stated that the girls seemed to 'get a lot out of' the aerobics block and got 'quite sweaty' (BF1:5A199). The girls (especially those with injuries) had also shown interest in circuit work which took place at the back of the gym during step aerobics. According to the male PE teacher, basic weightlifting (with an emphasis on technique) had been introduced to year nine boys, and aerobics to year nine girls, in order that they could choose to develop this further during KS four. The male PE teacher claimed that the weightlifting had been popular initially but its appeal had tended to 'fall off' because, although the boys recognised its value, they did not see any 'definite improvement' (BM2:5B583).

It was explained that the year seven pupils 'looked at how activity can affect your pulse rate' by rotating around such activities as three-a-side football, basketball and skipping, taking a 'quick pulse check' in between (BM2:5B495). An example of a lesson within the HRF block involved pupils in walking, jogging, skipping, and a ball game, to see which had the greatest effect on their heart rate (BM1:6A15). In terms of content, the PE HoD stated that stamina, strength, and suppleness were included and that part of the HRE programme in years seven and eight involved pupils matching sports to those three components (BM1:6A103). He considered that each 'part of PE' delivered 'certain parts to a higher degree than others', for example gymnastics involved suppleness, and athletics was associated with speed and stamina. He stated that pupils often asked why they were doing gymnastics because they could not see its relevance for later life and he explained that it balanced their physical requirements (BM1:6A111). The male PE teacher stated that the following content was included in the HRF course: aerobic and anaerobic work, pulse rates, weights, measuring fitness, monitoring diet, stamina, flexibility, strength (BM2:5B471;487) including 'basic stuff' such as warm up and warm down, and the way the heart rate changes after the warm up and during exercise (BM2:5B479). The female PE teacher stated that flexibility was covered mainly in lesson warm ups and that PE staff informed pupils about the importance of suppleness in avoiding rheumatism and arthritis in later life (BF1:5A239).

The PE HoD explained that weight management was covered in terms of talking about balancing energy intake and output but 'not to a massive degree' because some of it was delivered in food technology and in the SE programme (BM1:6A127). The male PE teacher described the weight management part of the course as 'nothing

major', just providing pupils with a fact sheet about healthy eating and asking them to record their diet for homework (BM2:5B507). The female PE teacher commented that there was insufficient time to record a diet sheet (BF1:5A243). With respect to designing personal exercise programmes, the PE HoD explained that this was covered in that, during athletics lessons, for example, PE staff discussed exercises that could be done at home with little equipment (BM1:6A135). The male PE teacher stated that designing personal exercise programmes was only covered in a 'basic form, nothing really specific' and only by GCSE pupils (BM2:5B527). The female PE teacher considered that designing personal exercise programmes was partially covered in the HRF course and through the PE activities, and pupils were encouraged to be more responsible for their own fitness (BF1:5A247). The PE HoD stated that, in his previous school, the PE curriculum had included first aid and lifesaving which he considered to be important life skills that should be delivered through PE, as they are 'part and parcel of breathing rates and testing your heart rate and things like that' (BM1:6A187).

The PE HoD explained that there was no fitness testing as such with years seven to nine although, a few years previously, the GCSE group had tested all the year seven pupils. His view was that fitness testing provided children with a 'benchmark as to where they stand and where they are' but considered that fitness testing had to be done 'fairly sympathetically' to avoid 'putting some children off', especially the unfit. In his opinion, fitness tests 'done badly' could make the situation 'worse' (BM1:6A35). The female PE teacher explained that some fitness testing was included in the HRF block but not too much, 'so as not to turn them off'. She tended to provide examples of fitness measures, an example being that 'if their heart rate takes a long time to recover, they may be less fit or might have been working harder' (BF1:5A235). The male PE teacher mentioned that the department had their 'own test' which the pupils did once a month and involved running as many widths of a pitch as possible in ten minutes. The results were recorded but no other use was made of them (BM2:5B539). The PE HoD explained that KS four pupils were responsible for themselves and generally performed their own warm ups although 'every so many weeks', a 'more vigorous, teacher-led warm up' was included such as running shuttles across one half of a pitch in three minutes, recording the score and repeating the activity five or six weeks later (BM1:6A27). The PE HoD described the PE staff as 'opportunists' who incorporated the 'bleep test' into PE lessons during bad weather.

The HRE blocks were taught in single sex groups. The male PE teacher would have preferred mixed sex lessons for the HRF blocks but the PE HoD explained that this was not possible because the structure of the timetable resulted in there being

insufficient resources for all staff to teach HRF at the same time. Therefore, the HRF blocks were timetabled against games which 'had to be single sex', thus HRF had to be the same (BM1:6A143). The female PE teacher thought that the department might teach HRF in mixed sex groups for years seven and eight in the following year as the mixed sex athletics had 'worked very well' (BF1:5A167). She considered single sex groups to be more appropriate for year nine as the pupils were 'going through puberty' (BF1:5A223).

The PE HoD considered that pupils thoroughly enjoyed the HRF blocks and, in his view, these blocks 'set the tone' for other PE activities. For example, pupils could warm up for themselves in swimming and take a pulse count after swimming for so many minutes (BM1:6A19). He considered that the 'initial matching of theory to practice' was important (BM1:6A19), and that his department did this 'very well' through a structured programme for years seven to eleven (BM1:6A179). The male PE teacher considered that the pupils reacted 'very positively' to the HRF blocks because of the range of activities offered (which was intentionally not just circuit-training and running) (BM2:5B495). It was mentioned that the HRF block included modified endball and an 'active American football-style game' which the pupils enjoyed (BM2:5B495). However, it was also stated that one of the reasons for introducing the HRF blocks was because the 'less able' pupils had become alienated from sport (due to the previous PE 'regime' in the school), and it was thought that 'fun games' and activities within HRF blocks would 'bring them back'. It was felt, however, that the pupils had to be 'converted initially' because 'all they wanted to do was go out and play games' (BM2:5B491).

The PE HoD stated that care needed to be taken to avoid becoming 'bogged down' with the paperwork that could be 'generated' from health-related work and fitness testing. As pupils only had PE once a week, he considered that PE time had to be 'active' and had to 'mean something otherwise they'll just vote with their feet if you go overboard with it' (BM1:6A55). He described the need to 'match up' what the pupils 'want to do' with what you 'need them to do', as a 'juggling act' and considered that the balance they had in their HRF block was 'about right' (BM1:6A55-63). The male PE teacher considered that the HRF programme seemed to 'work reasonably well' but was wary of the potential problem of spending 'too long looking at a theoretical topic' which might 'turn pupils off' because, in their one double lesson a week, they want to 'use up energy and actually do something' (BM2:5B483). He explained that the staff aimed to keep the HRF lessons practical and this 'seemed to work', with pupils following worksheets and completing parts for homework. The female teacher described the HRF lessons as almost one hundred per cent practical and similarly

considered it important that the lessons were active, especially for pupils who were not involved in extra-curricular activity and who might otherwise not get any activity (BF1:5A255). She felt confident about teaching health-related aspects of PE as she had only finished her teacher training one year previously and had specialised in physiology. The male PE teacher felt very confident about teaching HRF as it was an area of personal interest and claimed that it was one in which he and the PE HoD had 'quite a background' (BM2:5B471). He considered that the part-time female PE teacher might not be so confident due to her limited knowledge of the area which was 'understandable given that the main emphasis on HRF has been in the last ten years or so' (BM2:5B647). He suggested that this issue could be resolved through internal INSET.

The PE HoD considered that HRE could be assessed by asking pupils to organise a programme for themselves. It could also be judged by pupils' positive attitude towards activities which he considered to be the main aim of PE. He had not 'got around' to assessing whether pupils understood the benefits of exercise but was confident that the pupils did have this understanding as the PE staff had 'delivered it often enough through our lessons' (BM1:6A195). Currently there was no assessment of HRE at KS three although the PE HoD considered that it might be necessary to include an 'exam situation' with a written test and a fitness test in the future but he had yet to 'work this out' (BM1:6A203). The male PE teacher judged the success of the HRF programme on the pupils' participation rates at school and after leaving school but had only limited knowledge of the latter (BM2:5B631). Similarly, the female PE teacher felt she was succeeding if pupils of all abilities were attending extra-curricular practices and 'wanting to come back' (BF1:5A399).

6.3.3 The Support Structure

In terms of HRE resources, the PE HoD explained that the department had adapted the twelve ready-made lesson plans and worksheets from the 'Action for Heart Health' text (Harris & Elbourn, 1990) into four or five lessons by amalgamating several sessions, changing some of the exercises, and 'cobbling together' the worksheets using the photocopier (BM1:6A115). No other resource was used as this was considered to be 'good enough to deliver what we wanted' (BM1:6A115). The male PE teacher explained that the 'Action for Heart Health' resource was their main source of information and had been obtained on an INSET course and modified for use with their pupils (BM2:5B491). The female PE teacher considered that the department was well-resourced for HRE and that the 'Action for Heart Health' text was 'quite good' with helpful questions, answers and pictures. She explained that she had compiled the HRF worksheets into a booklet on personal fitness and diet as she

preferred a 'more jointed piece of work' (BF1:5A159-171). The pupils kept the booklet to record their activities and were given feedback at the end of the course. Within one particular year nine group, a pupil owned a sportswatch and it had been possible to assess heart rates and to obtain printouts using a computer (BF1:5A171).

The PE HoD and male PE teacher stated that there had been no INSET on HRE in the area for some time. The male PE teacher explained that the HRE INSET course that he had attended about five years ago had been initiated by the PE inspector, was 'very well presented' and it was 'on the back of that, we initiated the programme' (BM2:5B559). The PE HoD thought that PE inspectors wanted to see the type of HRE programme that his department were running, developing pupils' 'knowledge base' so that they 'understand why they were doing what they were doing' (BM1:6A71). No specific feedback was provided within the OFSTED report regarding HRE, and it 'seemed' that the inspector was 'pretty happy' with the schemes of work (BM2:5B575). The PE HoD thought that other schools in the area approached HRE in a similar way to themselves and that much depended on the amount of PE curriculum time that they had (BM1:6A51). His view was that schools worked in isolation (BM1:6A67). He had obtained a booklet from one of the local schools on HRE but considered it to be 'like an examination..., it's quite a long-winded affair' and stated that he could not afford the time to include it (BM1:6A67). The male PE teacher did not know how other schools approached HRF and he explained that when PE teachers did meet up, it was normally on a fixture basis with little discussion of curriculum issues (BM2:5B571).

6.3.4 Beyond the Curriculum

The female PE teacher considered that pupils' activity levels were low and that many pupils were involved in sedentary activities such as watching videos and playing computer games. Many pupils 'get lifts' to school even when they live close which previously 'was never heard of' and she thought that this situation made it more difficult to motivate pupils in PE (BF1:5A355). She was of the opinion that the 'crux' of the problem was that pupils had less PE now (as a schoolchild she used to have PE four days out of five). As a consequence of additional subjects in the curriculum and more emphasis on some subjects, she considered that PE had lost out and that the situation was now a 'farce' (BF1:5A343). Her view was that the PE department did as much as it could but this was still not enough, 'it's like banging your head against a brick wall' (BF1:5A347). In agreement, the male PE teacher stated that the PE profession was 'fighting a losing battle' and considered that it was society's problem, not necessarily that of the PE profession (BM2:5B615). In his opinion, children were not active enough and did not 'get the activity they needed at break times'. He did

explain that an outside basketball court was being fitted but that this would still not be enough (BM2:5B611). He gave the example of 'sporty girls facing peer pressure not to participate' and teenagers not wanting to 'look sweaty and tired', preferring to be out on the streets 'hanging around' with their mates. 'It's hard work to be doing a sport and it's easier to hang around with your mates and it's just as much fun' (BM2:5B615).

The PE HoD explained that the extra-curricular programme comprised school sport (for the teams), recreational sport (for fun), and short courses (such as a six week trampolining, tennis or gymnastics award course) (BM1:4B348). Extra-curricular activities took place at lunch times and after-school on most days. In addition, informal activities (such as recreational badminton and table-tennis) took place before school and fixtures were arranged for some weekends (although this was mainly for boys). The PE HoD considered that there was much happening in the extra-curricular programme and estimated his involvement as up to twelve hours per week (BM1:4B306). However, the majority of time was spent on school teams which he estimated involved about twenty-five per cent of the school population (BM1:4B348). There were more boys' teams than girls' as the latter tended to be formed from combined year groups. The PE HoD commented that the majority of pupils were 'not as well serviced as they should be' (BM1:4B352). The male PE teacher considered that the 'hardest part of our job' was to provide for the talented pupils as well as the non-team pupils, and claimed that there were currently more activities than there used to be that were not 'geared towards team selection', examples being lunch time basketball leagues (BM2:5B599-603). He used to run a fitness club at lunch time which was popular with 'less able' pupils but this had 'fallen by the way side, with other things going on' (BM2:5B527). He added that, with only two male PE staff, the 'emphasis goes back on the school teams' as the senior teachers want successful school teams so 'unfortunately this is where you have to put the majority of your time' (BM2:5B603).

Although help was available from other staff (mainly male teachers), it was not as much as the PE department would have liked. The female PE teacher considered that much more support was needed 'on the female side' and commented that 'men can commit themselves more' whereas the 'female members tend to give more of their time to their family' (BF1:5A371). She considered that the PE staff would like to spend more time coaching the better pupils as well as catering for recreational players. In her view, the lack of staff support was frustrating (BF1:5A379) and she recognised the need for staff to have confidence to commit themselves to helping out (BF1:5A387).

Apart from a sponsored walk to raise funds for the school, there were no specific events organised to promote exercise. The male PE teacher thought it would be well worth organising such an event but explained that it would require people working in unison. He felt that at present the staff were 'fighting the canteen' and 'telling pupils one thing and offering them the other' (BM2:5B595). The PE HoD stated that 'you've got to be a bit careful..., one minute you suggest it, the next minute you're doing it' (BM1:6A163). He was cautious about the amount of influence a school can and should have on children's health (especially their diet). His view was that children's health was a parental responsibility, that HE needed to be delivered sensitively, and that teachers were 'in danger of putting over' their own ideas (BM1:6A163). However, he did consider PE teachers to be 'experts on exercise' and capable of positively influencing children's activity levels (BM1:6A167).

6.4 Section 3: The Place and Expression of HRE in School C

6.4.1 Health-Related Policies

The school policy for HE was for it to be delivered through the subject areas and through twice-yearly three-day 'suspended timetable' slots during which specific health issues (such as drugs and sex education) were covered. All four PE teachers contributed to teaching aspects of health during the 'suspended timetable' programme. The male PE teacher was the HE co-ordinator although he stated that he would like to 'get out' of being responsible for a cross-curricular theme such as HE 'because of the nightmare organisation that is involved' (CM2:10A41). He explained that, as a theme co-ordinator, he was responsible for ensuring that all aspects of HE were covered by all pupils, and also responsible for identifying any gaps within the curriculum. He described as a 'nightmare', the task of establishing whether schemes of work were up to date, and finding out precisely what was being taught, and whether departments were actually covering what they said they were (CM2:10A331-335). He explained that obtaining detailed information from staff was difficult because teachers did not have the time to deal with the 'absolutely phenomenal' amount of 'paperwork' involved (CM2:10A355). The PE HoD claimed that most of the HE was taught within the PE curriculum (CM1:9B126). The male PE teacher was aware that the science staff included the topic of exercise in so much as pupils were often seen 'charging up and down the stairs' and 'taking pulse counts' (CM2:10A331). The female PE teacher considered that the school's approach to HE could be described as 'a bit hypocritical' as the school canteen served food that was not especially healthy but catered for what the pupils wanted (CF1:8B804).

The PE HoD considered that over the years the government had tried to educate people through the media about the importance of health throughout life but that they had 'missed a golden opportunity' in not making more of it in the NC and the NCPE. His view was that 'maybe guidelines should have been drawn up for schools' so that all schools were following a 'similar pattern' (CM1:7B739-763). He was of the opinion that HRE should have been an activity area because time needed to be set aside for pupils to learn the theory in a classroom with the help of visual aids such as diagrams of muscles and body fat charts (CM1:7B743). In this way, he considered that pupils would appreciate the topic more when it was mentioned in the 'actual games situation'. He stated that there was no point including HRE 'without a good explanation' (CM1:7B743). He considered that health-conscious individuals would improve their overall ability within PE since the 'fitter the body, the more they are going to get out of it' and stated that if PE teachers could stress the importance of being healthy at school, then in later life individuals would reflect back on what they had been told at school and would 'hopefully benefit from it' (CM1:7B767).

The female PE teacher considered it possible to teach HRF through the activity areas and that this was a way of 'showing' that HRF was 'not separate' but a 'part of the same overall aim' in PE (CF1:9A25). However, she expressed the view that it was 'easier' teaching HRF in blocks but that, in order for it to make sense to children, it needed to be emphasised in every PE lesson (CF1:9A29). Her view was that HRE had not been granted the status of an activity area within the NCPE because there would have been too many areas. However, she stated that 'one could not miss out something like that', especially with 'all the information about fitness levels declining' and increases in stress and heart disease (CF1:9A37). The male PE teacher was also of the opinion that teaching HRE was 'easier' in blocks (CM2:10A183). He explained that his final year college thesis explored different methods of approaching HRE, his conclusion being that the most effective way of delivering it was through separate blocks per year with it reinforced in all PE lessons (CM2:10A187). He added that it was difficult within a lesson situation to include everything and that, 'from a planning point of view, I think it would be far harder' to deliver HRE through the activities (CM2:10A191-195). He explained that the department policy was for reinforcement to be delivered by the PE teachers 'in their own way' (CM2:10A227). He considered that HRE should have been an activity area within the NCPE because of its importance and was surprised that it was not as he thought that the government would have valued and supported 'the health side' (CM2:10B415-419). He supposed that HRE had not been granted the status of an activity area because it was hoped that it would be 'part of all the others'. However, he expressed some concern that HRE seemed to have been left such that 'some schools can practically get away without

doing it' (CM2:10B415). In his opinion, schools that had not had new staff within the past ten years ('and there are plenty of them') would probably know 'practically nothing' about HRE (CM2:10B423). Indeed, he suspected that if he had not done HRE work at college and had not come to his present school, the PE department would probably not be doing any HRE work. He 'wouldn't be surprised if that wasn't the case throughout a lot of schools' and that much depends on 'the background of the staff and what they know about' HRE (CM2:10B423).

The female newly-qualified teacher (NQT) considered HRE to be an important area of PE as pupils need to understand why they are doing exercise. She was of the opinion that it was 'probably better in blocks because it's more organised that way' and easier for teachers and pupils to see improvements (CF2:8A48). Her view was that 'if it wasn't organised in blocks, everything would run into one another' (CF2:8A48). Her preference was for a half-term block per year on HRF although she commented that much depended on the amount of time available for PE as there might not be 'the time to cover health-related as well as all the other aspects' (CF2:8A92-6). She was unsure about whether HRE should be 'forced on schools' and suggested that the NCPE might have stipulated that it was to be delivered in three of the five secondary school years so that the 'basics' were delivered and 'extended' (CF2:8A175). Her view was that HRF was 'separate and different' from the government emphasis on traditional sports (CF2:8A171). She considered that HRF had 'just got stuck out on a limb' and schools were 'sticking to traditional sport'. However, she considered that it was included in most schools' curricula and that it was 'not a forgotten area because it's not in the six sports, the six areas' (CF2:8A171).

6.4.2 Health-Related Practices

All PE staff used the term 'health-related fitness' when describing health-related work within the PE curriculum. The HRF programme comprised a six or seven week half-term block for years seven to nine. These blocks were taught in single sex groups although both girls and boys followed the same HRF booklet which had been designed by the male PE teacher. It was explained that most of the course was practical, with only the occasional lesson in which pupils did not get changed. An example of HRF work was discussing and performing different exercises for warm ups and warm downs (CM1:7B670). Year ten pupils followed a 'sport and leisure' module within the DOVE programme in which they investigated sports facilities in the area, visited at least two venues, participated in two activities, and produced evidence of this within a written report (CF1:8B672). In addition, there was a compulsory fitness programme for year ten pupils and an optional one for year eleven pupils which took place in the new fitness area. The female PE teacher stated that a

future intention was to design a module of work for year ten and eleven pupils which would provide them with more access to the fitness room (CF1:8B704). The PE HoD considered that year ten girls were 'very willing' to work out in the 'new fitness suite' and 'put quite a lot of effort' into trying to improve their fitness within the programme (CM1:7B791). He explained that after three or four weeks, staff reviewed the pupils' targets and suggested changes such as increasing the repetitions. His view was that the pupils enjoyed the challenge and appreciated being able to use good equipment such as steppers, and cycling and rowing machines (CM1:7B791). The female PE teacher stated that aerobics was included in the girls' PE curriculum for year ten and was an optional activity for year eleven (CF1:8B517). Her view was that HRF was an area that could be developed 'a little bit more', especially with the new 'weights room'. She considered that the pupils viewed fitness work 'as a grown up exercise', as well as being different to the other PE activities, and that it represented 'the way forward' and a means of 'reaching' pupils (CF1:9A97).

In terms of the content of HRF blocks, the female NQT considered the following topics to be suitable for inclusion: body awareness, general health and its benefits, drugs, sports injuries, smoking, alcohol, sport and its benefits, how sport relates to health, some physiology, fitness testing, medical tests, heart rates and how they differ at different ages (CF2:8A84). She suggested that the theory should become 'more complicated' through years seven to eleven. She would include a running or step test in each block to assess progress by comparing changes over the years and she 'imagined that some would get better and some would get worse' (CF2:8A88). The female NQT considered activities such as aerobics and step aerobics to have a place within the PE curriculum, particularly for year eleven girls as they were likely to continue these activities after leaving school. She felt that if they learned the basics at school they would not feel so self-conscious when starting a new class. She also made the point that only those girls who were 'very good' could join a netball or a hockey club whereas a group of friends could all enjoy a step aerobics class together (CF2:8A139). In her view, it was best to let pupils do something that they enjoy because they would be more co-operative and work better at it than they would if forced to do something that they did not want to do (CF2:8A155).

The PE HoD explained that the department had 'blocked' health work for the past six years as they considered that there was a need to introduce children to the importance of health and thought that it would be a 'good idea to introduce it into the PE curriculum' (CM1:7B634). The PE HoD stated that other influences were the cross-curricular themes within the NC, the influence of the PE adviser who 'was quite strong' on the area, and the male PE teacher's enthusiasm for and knowledge of the

area (CM1:7B638-650). The PE HoD explained that when he was at college, 'there wasn't a great deal of emphasis put on the health aspect' of PE but it was 'quite a large element' of his male colleague's training (CM1:7B755). The PE HoD considered that a school's approach to HRF would be heavily influenced by the presence of a teacher within the department 'with a strength in that particular field, who knows a lot about it, and who can inform other members of the department about it's importance'. He also commented that 'nowadays there is more and more documentation coming out about HRF' (CM1:7B755). The female PE teacher commented that, before the HRF blocks, the department did not cover any health issues within PE (CF1:8B760).

The year seven HRF course involved pupils in evaluating their own general fitness and in self-evaluation of their activity levels through completion of a questionnaire (CM2:10A279). The course also covered safety, healthy diets and how the heart works (CM1:9B130). As part of the course, year seven pupils watched a video which covered topics such as 'the smelly bits and showering', safe use of equipment, helping yourself by what you eat and drink, what fitness is, what the heart does, and why it is important to look after yourself (CM1:7B662). In the year eight HRF course, pupils explored in more detail cardiovascular fitness, flexibility, muscular fitness, and body fatness. Fitness tests were performed and scores recorded on individual profiles with the exception of body fatness which was not reported as 'it wasn't felt to be a good idea' (CM1:7A283). The female PE teacher commented that pupils' body fat percentages were calculated but that the staff tended 'not to make a big thing of that' as the pupils were 'quite sensitive' about the issue (CF1:8B796). The year nine HRF course focused more on 'performance and training' and included a comparison of fitness scores with those of previous years (CM2:10A283). The male PE teacher explained that, within the year nine course, pupils designed their own fitness circuits (CM2:10A359). However, the female PE teacher stated that year nine pupils 'don't really get involved in planning their own sort of programme' and that was 'one of the things' that the OFSTED inspector had 'mentioned' (CF1:9A41). The PE HoD stated that year ten boys designed their own circuits which they then followed and evaluated (for example, the circuit might have 'too much emphasis on just leg movement') (CM1:9B134). The male PE teacher considered the year eleven option programme to be 'quite limited' as only three PE staff were available (CM2:10A403).

The PE HoD explained that the HRF booklet had been reviewed and changed from time to time, such as introducing new warm up exercises which were considered to be more beneficial than previous ones (CM1:9B138). The male PE teacher explained that he originally designed the HRF programme and had since 'revamped' it. He considered that it needed to be re-written but that this would involve a lot of work and

he had little time (CM2:10A179). He explained that he had written it based on his college experience and that it was difficult to 'get it set just at the right age level' for pupils. He was not convinced that he had 'got it right' in terms of the 'theoretical' level as 'obviously you learn as you go'. He had completed a thesis at college on HRF work and one of his college lecturers was 'quite a known force in it' (CM2:10A243-7). Although the feedback from the HRF course was positive, his view was that it was 'aimed too high' with 'possibly too much theoretical work' (CM2:10A207). In particular, the year seven and eight work was 'too technical' and needed 'making more practical and more accessible to all' as some of the less able pupils 'struggled' with it and it was 'often difficult to keep their interest' (CM2:10A215). However, the PE HoD was 'quite happy' with the theoretical-practical balance of the HRF course (CM1:9B138-142). The booklet had not been re-written since the NCPE but the male PE teacher considered that it should 'match up' (CM2:10A275). He also stated that there were 'things that we teach in the HRF blocks that are obviously reinforced in all our lessons' but these were not clearly specified either by himself or his colleagues (CM2:10A183).

Fitness testing was a prominent feature of the HRF programme for years seven to ten. The PE HoD explained that pupils were tested two or three times a year and that it became 'like a little competition between them and their mates sometimes' to try and improve on what they had done in the past (CM1:7B719). The PE HoD explained that fitness testing highlighted to pupils where their fitness level should be, and he emphasised that fitness testing needed to be 'explained properly' to pupils (CM1:7B714). He considered that ninety-nine per cent of pupils had a positive attitude towards fitness testing. The male PE teacher was of the opinion that fitness testing 'brought home' to pupils how unfit they were and he considered that it 'certainly has a positive effect with some, I wouldn't say with all' (CM2:10A303). The female PE teacher considered that fitness testing provided pupils with feedback and helped them to understand the benefits of exercise and why they should be active (CF1:9A13). She stated that overall the girls 'don't seem to mind the fitness tests' but they did not like the twelve minute run, and she was aware that some girls even missed school in order to avoid the run (CF1:8B656;9A9).

The assessments for stamina, flexibility and strength were the same for all pupils although the charts used to grade pupils' ability differed slightly for girls and boys. The charts were compiled from the scores of initial samples of pupils when the tests were first introduced and included grades ranging from very poor to excellent. The male PE teacher explained that pupils were graded according to their cardiovascular fitness, flexibility and strength test results (such as the twelve minute run

performance) and comments were included on pupils' individual school profiles with some explanation of the fitness components for parents (CM2:10A287). The fitness profiles used to be compiled three times a year but this now only occurred once because it was 'taking too much time' (CM2:10A295). The male PE teacher stated that the staff attempt to 'go through' the test results with the pupils to help them understand how they might improve (CM2:10A303).

The male PE teacher who had designed the HRF programme considered that it was 'very successful' and that both staff and pupils 'enjoyed it' (CM2:10A179). However, he did comment on some resistance from the pupils when it was first introduced because they had not done it in previous years and thought that PE was 'all about having a game of football' (CM2:10A319). This was no longer considered to be a problem (CM2:10A323). The PE HoD's opinion was that the course was 'very good' and that pupils responded 'very well' to and benefited from it (CM1:7B658-662). The female PE teacher enjoyed the HRF work and considered that the pupils also 'enjoyed and got a lot out of it'. In her view, the teaching of HRF differed from the other PE areas because it provided the pupils with 'something to read, ...they are not always on the go' but she did not consider this to be problematic (CF1:8B780-785).

With respect to assessment of the HRF programme, it was explained that the year seven to nine pupils completed questionnaires which were all contained in the same booklet and permitted the staff to note progress such as improvements in fitness and changes in leisure activities (CM1:7B771). The PE HoD explained, however, that although the staff looked through the booklet, the reality was that 'it's just a quick flick' (CM1:7B779). The male PE teacher stated that they discussed changes in fitness scores over the years but did not address pupils' activity levels although he considered these to be 'pretty good anyway' for the boys and stated that 'it would be interesting to see what the girls are doing' (CM2:10B563). The questionnaire for year seven pupils included questions about how they travelled to school, how they spent their leisure time, how many were in clubs, and what they were aware of with regards to health and fitness (CF1:9A17; CM1:7B771). In addition, as part of the DOVE programme, year ten pupils visited sports centres and had to evaluate 'what they have done...and what they have got out of it' (CM1:7B779).

The female PE teacher commented that, apart from the questionnaire at the start of the course, the staff did not know how the HRF course affected activity levels as they did not get any feedback from the pupils. She explained, however, that the pupils used to complete a questionnaire after the course but had not done so this year (CF1:9A81). She stated that she would like to know the effects of the course, otherwise 'what is the

point of doing it?' (CF1:9A93). The male PE teacher similarly stated that the staff did not know if the HRF course 'worked' and that they needed to look at and spend more time on evaluation, an issue which had been 'picked up' by the OFSTED inspector. He explained that the pupils were supposed to complete an evaluation after each course stating what they had learnt but he considered this problematic with respect to HRF because they were aiming at changing attitudes and he did not know how this could be 'checked'. He considered it difficult to 'find out if you are actually being successful, if you are actually achieving anything' and stated his interest in knowing 'what the latest thinking on all that is' (CM2:10B591). He also commented on a further difficulty in that the HRF course tended to be a 'rush' and never achieved its seven timetabled sessions as it was delivered in the first half-term following Christmas ('because of the weather, we tend to be inside anyway a lot of the time') which was always disrupted by the 'suspended timetable' and the skiing course for which two or three PE staff were away (CM2:10B583). Although supply staff could deliver some parts of the HRF programme, he would not like them to deal with the fitness testing because the tests have to be 'done right or the figures are to pot and you get a false view' (CM2:10B591).

6.4.3 The Support Structure

No resources were used to support the teaching of HRE other than the HRF booklet which was put together by the male PE teacher from 'just about all the literature that was about' (CM2:10A231). He explained that the HRF booklet was quite comprehensive and provided his colleagues with everything they needed so that no extra effort was required of them (CM2:10A375). The female NQT had just completed a four year Bachelor of Education (B.Ed) Qualified Teacher Status (QTS) university course in which she had studied modules on physiology and fitness but had not covered 'how to deliver' HRE. She remembered one resource from her university course, 'Fitness for Life' but stated that they were 'not given any solid gold ones,...ones that you must read' (CF2:8A119). She stated that her third year teaching practice school 'did no HRF' in lessons although they probably would have claimed that it 'had gone throughout the whole of PE' (CF2:8A68).

The PE HoD and the female PE teacher described the PE inspector for the area as 'strong in the health area' (CM1:7B638; CF1:9A61). Indeed, the PE HoD stated that the way in which his department introduced HRF and continued it for the first three years of school had been praised by the PE inspector and viewed as an example for other schools (CM1:7B706). The male PE teacher was aware that the PE inspector was also responsible for HE but he had little contact with him other than information being passed on (for example, about asthma). He claimed that there used to be more

help from advisers in the past but there had been little in the previous two or three years. He was disappointed with the lack of support and finances and stated that it was 'quite hard to keep up with anything new'. In his view, there should have been more courses on HRF and more county-wide guidelines on the area (CM2:10B435). He was aware of one HRF course led by Len Almond which had been organised in the area but explained that he had not attended because it was at a weekend and involved 'big costs', in addition to which he had read many HRE articles and was 'well up' on what Len Almond 'was saying' (CM2:10A259). The PE HoD claimed that some schools in the area had a similar HRF programme to their own but others 'did not put much emphasis on it' (CM1:7B759). However, the male and female PE teachers were not aware of what other schools in the area were doing with respect to HRF. The male PE teacher stated that he would be interested to know this and that it would be useful if a meeting or course was 'arranged around' this subject (CM2:10B423). He explained that PE staff did attend a regular meeting each year but that the purpose of this was 'purely arranging fixtures' (CM2:10B427).

6.4.4 Beyond the Curriculum

The PE HoD was 'astounded' at how unfit children were 'nowadays compared to ten years ago', particularly evidenced during the pupils' first cross-country run in which some were 'wanting to walk within the first quarter of a mile' (CM1:7B723). In his view, the fitness of the pupil population arriving at the school had deteriorated considerably which was why the PE department had tried to emphasise the importance of general fitness and the benefits of exercise (CM1:7B727). He considered it unfortunate that, 'with today's lifestyle' children are 'given lifts here, there, and everywhere' and spend time watching videos and playing computer games rather than gaining the social and health benefits of being active (CM1:9B175). He claimed that the PE department aimed to provide a curriculum which appealed to everybody and in which pupils could 'find success' and 'achieve a goal', and he gave the example of less able children enjoying and 'getting a lot out of' playing badminton (CM1:9B183). The male PE teacher was of the opinion that the PE department provided enjoyable PE lessons and opportunities for all children to be active, in addition to emphasising opportunities outside of school.

The PE HoD considered that if children were 'willing to put themselves out' there were 'very many opportunities' to be active within the local village, examples being the cricket and athletics clubs which welcomed 'everybody' (CM1:7B731). Through his links with local sports clubs and talking to pupils, the PE HoD claimed to be aware of many children who did participate in football, cricket, athletics, tennis and gymnastics in the area. He considered that there was close liaison between his school

and local sports clubs (such as athletics, cricket, rugby, football and gymnastics) (CM1:7A217), and the male PE teacher similarly thought that pupils did not 'miss out' as the area was 'well off' for facilities and coaching (CM2:10B459).

The PE HoD considered that most of the boys were active outside of school, either pursuing a sport introduced to them at school, or other activities such as cycling and mountain bike riding (CM1:7B795). The PE HoD was 'quite amazed' at how many girls attended local gyms and he considered that they were 'making more of an effort now than they were doing two or three years ago' (CM1:7B795). Opportunities were available for girls to pursue individual activities such as swimming and aerobics but were considered to be 'sadly lacking' with respect to team games (CM1:7B807). All the PE staff considered that there were far more opportunities for boys to be active outside of school than girls because there were numerous boys' sports clubs (especially football) whereas there was a limited number of girls' netball and hockey clubs (CM1:7B799; CF1:9A109;113; CM2:10B511). The male PE teacher commented that opportunities for boys were all around them whereas girls had to 'put more effort into' finding opportunities and had to travel further afield to join netball and hockey clubs (CM2:10B499). His impression was that ninety-five per cent of girls 'do absolutely nothing' after leaving school but he knew that 'a lot of boys' kept up their sport because they were already involved in clubs whilst at school (CM2:10B515). Furthermore, the PE HoD made the point that there were few 'junior' club teams for girls, for example the ladies' hockey clubs had no 'under sixteen' or 'under eighteen' teams (CM1:7B799). In his view, this situation could only be changed through the national sports governing bodies getting together with local clubs and representatives, and establishing a strategy for the future (CM1:7B803). He considered it desirable to be teaching pupils activities that they could pursue in the extra-curricular programme at or beyond school although he was aware of limitations within his own local area. He did not, however, consider these limitations to be the 'fault' of the school or the NC (CM1:7B811). The female PE teacher considered that girls 'drifted out' of sport when they left school and their friends were no longer around (CF1:9A101). She proposed that one solution might be for local club coaches to take training sessions in school and get the girls involved as a group (CF1:9A105).

The female NQT considered that the PE profession had 'the ability, the equipment and the time' to increase children's awareness of exercise benefits and of their activity levels (CF2:8A195). The PE HoD and the male PE teacher were of the opinion that the government 'drive' on sport would only create changes if money was provided for good facilities and for coaches who were 'willing to give up their time' (CM1:7B815). The female PE teacher was unhappy about the government's focus on competitiveness

and excellence and considered it more important to 'get more people taking part' (CF1:8B435).

Extra-curricular activities for girls took place mostly at lunch time whereas boys' activities were mainly after-school because the male PE staff felt that there was not enough time for practices during the fifty-five minute lunch break. The male PE teacher also commented 'I just need a rest nowadays at lunch time' (CM2:10B467). There were fewer girls' teams because the age groups were combined (CM2:10B471). The male PE teacher stated that they offered practices for everyone and also team practices but explained that 'once we get into all the fixtures, the practices that were 'open to all' were no longer available' because the PE staff were 'away with the teams and we haven't anybody else to take them' (CM2:10B459). The male PE teacher commented on the tendency to offer fewer extra-curricular activities than they used to as a consequence of having to 'put more energy into different parts of my job' such as teaching a second subject (CM2:10B459). There used to be much assistance from non-PE staff in helping to run teams but now it was mainly the PE teachers, each responsible for three or four teams which was 'very time-consuming'. This situation had forced the PE HoD to 'knock one sport (rugby) on the head' and it was no longer in the PE curricular or extra-curricular programmes (CM1:7A145). Both he and the male PE teacher considered that the shortage of assistance from other teachers stemmed back to the industrial action eight or nine years previously, in addition to teachers now having to cope with increased paperwork and being directed to attend meetings (CM2:10B439). The female PE teacher was of the opinion that teachers had given up their goodwill because they were tired of changes in their own subject due to the NC, and meetings after-school. She considered that running extra-curricular activities was 'part of the job' of a PE teacher but talked of the dilemma of not 'spreading yourself too thinly', but at the same time wanting the girls to 'experience something that they want to do' such as aerobics, basketball and football (CF1:8B403). She commented that extra-curricular activities catered only for the team players and there was little on offer for non-team players. She added that badminton and tennis were available as recreational activities but the former was not offered regularly and tennis was only available in the summer term.

The male PE teacher was of the opinion that girls expressed much interest in extra-curricular activities 'lower down the school' but it seemed a 'bit of a struggle in upper school'. He stated that this problem did not arise with the boys who 'took everything and more' (CM2:10B475). In his opinion, girls seemed to be 'getting lazier' and becoming 'very, very unfit'. He believed that the 'thought of doing any running about or anything physical' was 'totally alien' to year nine girls and he was 'tempted to get

them out doing some cross-country running' (CM2:10B479). His impression was that hockey did not appeal to the girls and he explained that the playing fields were often 'very cold and unpleasant' and that pupils who were 'not particularly PE-oriented struggled out there' and that it 'switched off a lot of the girls' and some boys (CM2:10B483). He explained that the girls could wear tracksuits but the boys could not although they were considering changing that policy. His view was that 'something' was 'turning the girls off PE in years nine, ten and eleven' and he stated that it was difficult to get any of the year eleven girls to 'go outside'. However, he commented that some of the year eleven girls were very interested in the fitness centre and in 'watching their figures' and he thought that 'quite a few of them' attended local fitness centres. His view was that 'some of the competitive sports' tended to be a 'bit of a switch off' for girls more than boys, and that possibly the girls' PE curriculum 'might need changing' (CM2:10B523).

The PE HoD estimated that he spent a minimum of ten hours per week in extra-curricular activities (in months with 'light hours' after school) and this increased to twelve hours during the summer (with athletics and cricket events). He also estimated that he spent about another hour and a half per week on preparation, organisation of staff and pupils, written work, and telephone calls associated with extra-curricular activities (CM1:9B156-9). He further commented on the amount of supervision 'over and above the normal school day' involved in school camps, in addition to preparation and marking of second subject work (CM1:9B157-167). The male PE teacher claimed that he spent between four and twelve hours a week on extra-curricular activities although he stated that the department no longer organised weekend fixtures and were now only involved at weekends when necessary, such as for cup fixtures (CM2:10B539). The female PE teacher estimated that she spent about three and a half hours per week in winter and two hours per week in summer on extra-curricular activities (CF1:9A117). The PE HoD and the female PE teacher claimed that PE staff in the area were fully committed to their subject and were heavily involved in providing extra-curricular activities (CM1:7A161; CF1:9A121). The PE HoD was 'very annoyed' by media reports about limited school sport and stated that 'if I was paid overtime I could have retired ten years ago' (CM1:7A165). He considered that a 'hard core of about a dozen PE staff' were responsible for all the voluntary work in the area and he personally was the secretary, treasurer and team manager of a local sports club. Similarly, the male PE teacher found it 'sickening' to read newspaper articles about there being no school sport when 'a lot of people are putting a phenomenal amount of time into PE', some involved 'more than fourteen hours (a week) or a lot more', in addition to residential camps (CM2:10B547).

There were no school events which promoted exercise other than a fun run which had been organised to raise funds for a new school mini-bus. The female PE teacher mentioned that there was no longer a sports day 'because of people not being prepared to help out' (CF1:9A53). The male PE teacher explained that little could be done with respect to special events because he already experienced difficulty in managing the many activities with which he was involved such as organising teams and residential visits (CM2:10A399).

6.5 Section 4: Documentation

The documentation that was made available to me during the case study visits comprised the PE schemes of work for all three schools and the HRF booklets for schools B and C. The only documentation that I was given permission to retain was school C's HRF booklet.

The PE schemes of work for the three schools had all been recently written or revised due to previous or forthcoming OFSTED inspections. The schemes of work were presented in activity area categories and closely matched the programmes of study within the NCPE. HRE featured in school A's schemes of work only with respect to warming up for lessons, and learning about strength and suppleness in gymnastics, and about stamina in athletics. The schemes of work for schools B and C made specific reference to the HRF units and the associated pupil booklets. Both schools claimed to reinforce the learning from the HRF units through the activity areas.

The year seven HRF booklet for school B comprised a series of worksheets from the 'Action for Heart Health' publication (Harris & Elbourn, 1990) with which (as co-author of the text) I was obviously very familiar. The four worksheets used were entitled: 'Effects of Exercise on the Body', 'Learning about Heart Rate', 'Improving Heart Health', and 'Energy Balance'. As previously described by one of the PE teachers, these worksheets represented amalgamations of those within the 'Action for Heart Health' publication (Harris & Elbourn, 1990).

The HRF booklet for school C comprised information about PE kit and PE department rules, the year seven to nine HRF course notes, and details of six fitness tests with separate rating charts for boys and girls. The only illustration within the fifty-seven page booklet was on the front page of each of the three HRF courses and was that of a muscle-bound adult male lifting a barbell above his head which was obviously very heavy as evidenced by the strain and sweat on his face.

The year seven course included the following sections: a fitness questionnaire; an introduction to HRF (explaining why one should exercise); a self-evaluation of attitudes towards exercise and sports; results of regular activity (look good, feel good, be healthy, enjoy life); the effect of exercise on heart rate; warming up and cooling down; two practical activities (measuring your heart rate, and the effect of warm up, activity and cool down on your heart rate); parts of fitness (health-related and skill-related); HRF profile comprising fitness test scores for cardiovascular fitness (twelve minute run), muscle fitness (bent-knee sit-ups, bench press, bench squat), flexibility (trunk lift, cane lift, sit and reach), and body fatness (body measurement); and a pupil evaluation of the year (What aspects of PE have you enjoyed this year? What new things have you learned? What things have you found difficult? Please list any personal achievements below. Any further comments).

The year eight course included the following sections: cardiovascular fitness; practical activity (the effect of warm up and cool down on the heart); ways to achieve cardiovascular fitness (aerobic and anaerobic exercise; jogging, walking, cycling, swimming, home callisthenics, active sports); cardiovascular fitness knowledge check; muscle fitness; ways to improve muscle fitness (high knee jogging on the spot, astride jumps, side leg raises, leg changes, prone trunk lifts, press ups, knee dips, bent knee sit ups, isotonic and isometric exercises); muscle fitness knowledge check; flexibility; ways to achieve better flexibility (arm reach, trunk twister, hurdler's stretch, toe reach, long stride); flexibility knowledge check; body fatness; ways of controlling body fatness; body fatness knowledge check; HRF profile, and a pupil evaluation of the year (as for year seven).

The year nine course included the following sections: performance and training; actions to avoid or lessen the chance of injury; circuit training; first aid/sports injuries and their prevention; first aid questionnaire; HRF profile, and a pupil evaluation of the year (as for years seven and eight).

6.6 Section 5: Further Analysis

Up to this point in the Chapter, two types of analysis activity have been presented, data reduction and data display. Data reduction involved selecting, focusing, and simplifying the transcribed data which was then displayed as an 'organised compressed assembly of information' (Miles & Huberman, 1994). These processes were followed by a further type of analysis activity, conclusion drawing and verification, which involved noting regularities, patterns, explanations and propositions. This was done by assigning descriptive, interpretive, and pattern codes

to the data, these being used to organise and ascribe units of meaning to the data (Table 6.1).

Descriptive Codes	Interpretive Codes	Pattern Codes
Health-Related Policies	Roles/Responsibilities	Naturalistic Fallacy
HE Status/Approach	Peripheral Status	Locus of Control
View of HRE in NCPE		
HRE Policy/Structure	Medical/Scientific	
Health-Related Practices	Rationale/Discourse	Scientific Functionalism
Terminology	Technocratic Rationality	
Organisation		
Content: Activities;	Extent/Range of Concept	Conceptual Confusion
Knowledge Base; Testing	Limited Coherence/Clarity	
Responses to Practices	Rationale-Practice	Individualism/Victim-
Assessment	Relationship	Blaming/Lifestylism/ Healthism
The Support Structure		
Resources, Texts	Compatibility with	
Inspectorate	Conventional PE/Sport	Innovation: Opportunities
INSET	New/Different Teaching	& Obstacles
Local PE Staff	Methods/Skills	
Beyond the Curriculum		
Activity levels	Constraints/Problems	Futuristic Perspective
Extra-Curricular Programme	Limitations	Recognition/Reward
Events		Ambiguity of Aspirations
	Influences	
	Gendered Curriculum	Sexuality

Table 6.1 Codes Employed in Case Study Data Analysis

Codes were generated and assigned after data collection and transcription. The codes were regularly reviewed and were frequently changed and developed during the analysis process. The pattern codes assisted in identifying emergent themes both within and between cases. Memos were recorded as a rapid way of capturing thoughts that occurred during the analysis process. The final two Chapters of this thesis include discussion of the issues and themes emerging from the interpretive and pattern codes and the associated memos.

6.7 Summary

6.7.1 Health-Related Policies

In two schools, there was no specific HE co-ordinator and the teaching of HE was described as lacking co-ordination. In a third school, the PE teacher who was responsible for HE described the co-ordinating role as a 'nightmare'. In each school, the PE staff were aware of the inclusion of HRE in HE and science but there were no planned links between the subjects. In one school, HRE was incorporated into activity area schemes of work although it was recognised that this approach needed to be better organised. The PE HoD favoured a permeation approach but was aware that some of his colleagues had different views. In the other schools, HRE was viewed as important and a way of linking components of the NCPE. Written schemes of work for HRE were available for the younger year groups although the teaching of HRE was less structured for older pupils. The PE HoD in one school had introduced HRE units because of its importance, to avoid the focus becoming lost within the subject, and because he considered that it was a sound base for the other PE activities in terms of linking theory and practice. Another PE HoD had been influenced by the school's approach to cross-curricular themes and the views and expertise of his colleagues and the PE adviser. Several PE teachers considered that HRE was best filtered through the activity areas to avoid it being viewed as separate although they considered that discrete units represented a more organised and simpler approach with respect to planning. However, a few favoured discrete units and would have preferred HRE as an activity area to ensure that it was formally addressed. They were concerned that many schools were not addressing HRE due to teachers' limited knowledge of the area. The NQT commented that with limited PE time it might not be possible to include HRE. She viewed HRE as 'separate and different' from traditional sports but considered that it would not be overlooked in most schools.

6.7.2 Health-Related Practices

In one school, the PE staff used the term 'fitness' whilst in the other schools, all but one PE HoD, used the term HRE. In one school, HRE was taught through the activity areas although in the past there had been discrete units. PE staff suggested that some health-related work was permeated in swimming, cross-country running, games and gymnastics lessons. In this school, older pupils could opt for a fitness course at a local facility which required payment. In addition, girls could opt for aerobics in which they followed exercise videos by themselves. In a second school, HRE was delivered through discrete units at KS three with reinforcement through the other PE lessons but there were no HRE units for older pupils. Older pupils were given more responsibility in lessons and could opt for activities such as aerobics and step aerobics

which were generally selected by girls but not boys. In a third school, HRE was delivered in discrete units at KS three and involved pupils in a predominantly practical course during which they followed a HRF booklet designed by the male PE teacher. In this school, all year ten pupils followed an accredited module during which they utilised local sports facilities. Aerobics was included in the PE programme for year ten girls and was an option for older girls. Female PE teachers considered that activities such as aerobics had a place within PE, particularly for older girls because they could be enjoyed by pupils of all abilities, were likely to be continued after leaving school, and were viewed as appealing adult forms of exercise. The male PE teacher described as limited the year eleven option programme for boys. PE staff talked of plans for optional fitness courses for older pupils using the school's new fitness area.

In one school, the knowledge base was mainly associated with stamina, flexibility, warming up, diet, and a healthy lifestyle, with a small amount of strength work included. In this school, health-related work was sometimes given to non-participants and occasionally covered with pupils when the usual PE lessons could not take place. In a second school, the knowledge base was similar, with the addition of fitness testing and warming down. The PE HoD also considered first aid and lifesaving to be areas that could be delivered through PE. In a third school, the HRE knowledge base was associated with hygiene, safety, healthy diets, and general fitness, and progressed to covering cardiovascular fitness, flexibility, muscular fitness, body fatness, fitness testing, and performance and training. The female NQT envisaged a broad knowledge base for HRF comprising body awareness, the benefits of sport and how it relates to health, some physiology, sports injuries, and links with drugs, smoking, and alcohol. In each school, PE staff acknowledged that individual exercise programming and the role of activity in weight management were only minimally addressed.

No fitness testing was included in the PE curriculum of one school while, in a second school, some informal fitness testing was included in HRE units but staff were wary of an over-emphasis on this aspect putting some children off physical activity. In a third school, fitness testing was a prominent feature of the HRE programme for years seven to ten. The fitness tests measured stamina, flexibility, strength and body fatness and pupils' grades were included on individual school profiles and annually reported to parents. One PE teacher commented that pupils' body fat percentages were calculated but not reported because of pupils' sensitivities about the issue. The reasons for including fitness testing varied between making pupils realise how unfit they are, to helping pupils to understand the benefits of exercise and why they should be active. The PE HoD considered that nearly all pupils had a positive attitude

towards fitness testing although one colleague considered that it positively affected some pupils but not all, and another colleague was aware that many girls disliked the running test and some even missed school to avoid it.

In both schools with discrete HRE units, these were organised in single sex groups, the justification being that HRF was timetabled at the same time as single-sex games. In one school, the male PE teacher would have preferred mixed sex lessons for the HRF units and the female PE teacher thought that mixed sex HRF might be introduced with the younger pupils. However, she considered single sex groups to be more appropriate for year nine because of pubertal changes. In another school, it was considered that pupils reacted positively to the HRF units because of the non-conventional content and the focus on enjoyment which was considered to appeal in particular to the 'less able' pupils. However, PE staff in both schools with discrete HRE units commented on initial resistance by some pupils because it differed from their usual games-playing lessons. They also commented on the need to balance theory and practice and to ensure that PE lessons were predominantly active because of the perceived low activity levels of pupils outside of school, and the preference of pupils and staff for active work. In one school, the PE teacher who designed the HRE programme considered it possibly too theoretical for younger pupils and that it needed to be more practical to maintain the interest of the less able. Full-time PE staff felt confident teaching HRF lessons although it was considered that older and part-time PE teachers might not be so confident due to their limited knowledge of a new area. In one school, all PE staff enjoyed teaching the HRF course and commented that pupils responded very well to it. The PE HoD considered that year ten girls enjoyed working out in the new fitness suite, and the female teacher stated that girls viewed fitness work as an adult form of exercise as well as being different to the other PE activities, and that it represented a way forward in terms of maintaining their interest.

In one school, assessment of HRF had not been considered and was an area to be addressed in the future. In a second school, the PE staff had not got around to assessing whether pupils understood the benefits of exercise although the PE HoD considered that HRE could be assessed through pupils' attitude to activities and by asking pupils to organise a programme for themselves. In this school, the male PE teacher judged the success of the HRF programme on pupils' participation rates at school and his limited knowledge of activity levels after leaving school. A female colleague felt she was succeeding if pupils of all abilities were regularly attending and enjoying extra-curricular activities. In a third school, assessment of HRF for year seven, eight and nine pupils involved them completing a questionnaire in year seven and performing annual fitness tests. In addition, year ten pupils visited sports centres

and completed a written evaluation of their work as part of an accredited course. In this school, the PE teachers considered that they needed to review evaluation and stated that they could not judge the success of the HRF course as they did not monitor effects (such as activity levels). Assessment in HRF was viewed as problematic because of the difficulty of measuring changes in attitude and because the HRF course suffered timetable disruptions.

6.7.3 The Support Structure

In one school the resources which had been previously used to support the teaching of HRE were 'home-made' worksheets and a 'fitness-orientated' programme. In a second school, a publication obtained on an INSET course had been adapted into a pupil booklet. In a third school, a comprehensive HRF booklet had been compiled by the male PE teacher from a range of HRF literature. In one school, the PE teachers had received no specific advice from the PE inspectorate regarding HRE although one PE teacher recalled it having a higher profile in previous years. In a second school, the PE teachers stated that there had been no INSET on HRE in the area for about five years. However, they considered that the PE inspector was content with their approach to HRE although there was no specific feedback on HRE within the school's recent inspection report. In a third school, the staff stated that the PE inspector for the area specialised in health issues and had praised the school's approach to HRE. Several PE teachers were disappointed with the general lack of support and finances for INSET. One teacher considered that there should be county-wide guidelines and more courses on HRF. However, he had decided not to attend a recent HRF course in the area because it was at a weekend, was expensive and he considered himself to be familiar with the tutor's views and ideas. The NQT had completed physiology and fitness modules during her training course but had not experienced any teaching of HRE during her school practices. In each school, PE staff showed minimal awareness of what other PE teachers in the area were doing in terms of HRE and stated that PE teachers met regularly to organise fixtures but not to discuss curriculum issues.

6.7.4 Beyond the Curriculum

PE staff in each school commented on the deterioration in children's fitness, reasons offered for this being non-specialist teaching of PE in primary schools, reduced PE time in secondary schools, and sedentary lifestyles. They considered that PE's role in promoting activity was limited due to external societal influences, and they claimed to emphasise fitness and the benefits of exercise, and to offer appealing PE curricula, enjoyable lessons, and opportunities for all children to be active. PE staff in each school considered that the department had a reasonable to good reputation in terms of extra-curricular sport (mainly based on performances in boys' sports). In each school,

extra-curricular activities took place regularly at lunch times and after school most days and on some weekends (the latter mostly for boys). In two schools, girls' activities took place mostly at lunch times with few after-school or at weekends, reasons being the family and work commitments of female PE staff, and, in one school, the 'bussing' situation. PE staff considered that extra-curricular involvement was not recognised or appreciated by senior staff, and they mentioned changes forced on them such as the abandonment of the school house system. Two schools no longer organised sports day due to changes in the pastoral structure and teachers not being prepared to assist.

All PE HoDs claimed to be involved in ten to twelve hours of extra-curricular activities per week in addition to time spent on preparation, organisation, second subject teaching, and school camp commitments. Their colleagues generally spent the same or less time on extra-curricular activities per week. Teachers in one school considered that PE staff in the area were heavily involved in extra-curricular activities and that a core were responsible for all the voluntary work in the area. All PE teachers were irritated by media coverage implying a decline in school sport as they considered that much time was being put into extra-curricular programmes. PE staff considered that recent government sport initiatives required investment in resources, facilities and coaches and female staff in two schools were unhappy about the government focus on competitiveness and excellence.

In each school the majority of the time was spent on school teams, reasons given for this being the limited number of staff and time involved and the expectations of senior staff. PE staff were aware that the extra-curricular provision was biased towards the more able team players and acknowledged the dilemma of offering opportunities to all pupils given the constraints of limited staff numbers and time. Each school offered recreational activities (eg. swimming and badminton) but these were sometimes interrupted due to fixture commitments. All PE staff commented that there were more boys' teams than girls' partly because the girls' teams were formed from combined year groups. In one school, female PE staff considered that boys' extra-curricular activities were more team-oriented than those for girls. All PE staff considered that more boys than girls were active outside of school and that there were far more activity opportunities for boys. In another school, the PE HoD's impression was that the vast majority of girls were inactive after leaving school in contrast to most boys who remained active. The female PE teacher in the same school considered that girls 'drifted out' of sport when they left school and their friends were no longer around. A male PE colleague noted the reluctance of older girls to be involved in physical activity and commented on factors which would turn them off such as the focus on

traditional competitive sports and being outside in cold weather. However, PE staff in two schools commented on the growing interest of some older girls in fitness and gym work.

Staff in each school received some help with extra-curricular activities from non-PE staff (mostly males) but expressed the desire for more assistance, especially from female staff. The view was expressed that assistance from non-PE staff had reduced due to the industrial action in the 1980s and the extra demands of the NC. The view of one female PE teacher was that males could commit themselves more to extra-curricular activities than females who had greater family commitments. In the third school, one male PE teacher considered that he was putting less time into extra-curricular activities than previously because he had to invest more time in his second subject. Other than sponsored walks or fun runs to raise funds, there were no specific events organised by the schools to promote exercise. Reasons proposed were the workload involved in organising such an event, the current demands on staff, the difficulties in co-ordinating unified messages within the school, and the limited influence a school can have on children's health.

6.7.5 Documentation

The PE schemes of work for each school were presented in activity area categories and closely matched the PoS within the NCPE. In one school, HRE featured in schemes of work with respect to warming up for lessons, and learning about strength, suppleness and stamina in specific activity areas. The schemes of work for the other schools referred to the HRF units and claimed to reinforce what was learnt in the units through the activity areas. The year seven HRF booklet for one school represented amalgamations of worksheets within the 'Action for Heart Health' publication (Harris & Elbourn, 1990). The HRF booklet for a third school comprised the year seven to nine HRF course notes, and details of six fitness tests with rating charts. The only illustration within the booklet was that of a muscle-bound adult male lifting a heavy barbell. The year seven course included a fitness and attitude questionnaire and an introduction to HRF in terms of the effects of exercise, the components of fitness, and warming up and cooling down. The year eight course focused on cardiovascular fitness, muscle fitness, flexibility, and body fatness. The year nine course focused on performance and training, injury prevention, and first aid. The booklet contained a HRF profile (comprising fitness test scores) and a pupil evaluation for each year group.

Chapter 7: Discussion

7.1 Introduction

This Chapter reflects on and speculates beyond the results and considers ethical issues addressed within the research process and limitations of the study. The Chapter is presented in nine main sections: (1) the rhetoric of HRE: this section discusses attitudes towards, and views of, health-related issues in the curriculum, (2) the reality of HRE: this section focuses on a discussion of curricular practices and procedures relating to HRE, (3) supporting HRE: this section discusses support for HRE in terms of the provision of INSET and resources, and liaison with other schools and professionals, (4) extending the curriculum: this section discusses the current and potential impact of the extended curriculum on the promotion of 'active living'¹, (5) gendered HRE: this section considers gender differences in the views, approaches and practices relating to HRE, (6) implementation influences and issues: this section reviews factors affecting the position and provision of HRE in the NC and NCPE, (7) the future of HRE within the NCPE: this section considers the potential for the future expression and privileging of health within the NCPE, (8) ethical issues: this section considers the ethics of the research process, and (9) limitations: this final section summarises the limitations of the study.

7.2 Section 1: The Rhetoric of HRE

This section discusses attitudes and views underpinning policies associated with health-related issues in the school curriculum.

7.2.1 Policy and Planning

The research results would appear to confirm Rowe and Whitty's (1993) concerns that cross-curricular themes such as HE, heavily reliant on a permeation model, might become casualties within a strongly subject-based NC. This is evidenced by the fact that only about a third of schools were considered to be working towards health as an important cultural practice, and approximately one fifth of schools had no designated HE co-ordinator. Indeed, the latter situation was evident in two case study schools and, in each, the teaching of HE was described as lacking co-ordination. Whilst this is an issue for these particular schools, it also highlights a general concern which has been associated with the teaching of HE in schools for some time. Indeed, back in 1981, Williams commented that teachers involved in curriculum mapping exercises were often surprised by the amount of HE in the curriculum but also disturbed by the

¹ 'Active living' is a term adopted by Fitness Canada in the promotion of physical activity and is considered to be a way of life in which physical activity becomes an integral part of daily life and leisure pursuits (HPEP, 1991).

haphazard and piecemeal approach to the subject. In his view, effective co-ordination should aim to bring contributions together so that they are coherent, intelligible and relevant to the lives of pupils, and it is his belief that a HE co-ordinator is needed to act as a catalyst, to stimulate debate across the curriculum, and to plan, organise and implement HE (ibid, 1981).

However, even where designated HE co-ordinators are in place, there may still be problems relating to liaison between staff, as was evident in well over a third of schools in the survey. This situation was particularly highlighted in one case study school in which the PE teacher, who was also responsible for HE, described the co-ordinating role as a 'nightmare'. Whilst the case study findings revealed some awareness by staff of the potential for planned links between PE, HE and subjects such as science, there was little evidence of any in practice. Interviews with PE teachers in the case study schools suggested that this was partly due to the additional workload and difficulty involved in co-ordinating and effectively delivering health messages within a school context. Although initiatives such as the 'health-promoting school' (Parsons et al., 1996) have the potential to promote effective implementation of health matters, the latter undoubtedly still requires school cultures that value health as well as designated and committed co-ordinators. Indeed, Hendry, Shucksmith, and Philip (1995) remain sceptical of the potential impact of the 'health-promoting school' movement which they view as innocent in its origins as an attempt to instil a more holistic approach to health in the school context, but which may in the future be hijacked as part of an audit of school ethos, or used as a marketing ploy by schools within an increasingly competitive arena.

Considering PE's long-term association with health, it is perhaps not surprising that PE teachers seem generally content that this contribution has been made more explicit. Indeed, most appear to favour such an approach as evidenced by the fact that over half of PE HoDs would have preferred that HRE was granted the status of an activity area, and many had chosen to deliver HRE through compulsory discrete units. The preference of several PE teachers in the case study schools for HRE as a specific activity area was because they viewed HRE as an important aspect of PE and wanted to ensure that it was formally addressed. A similar situation was described by Penney (1994) in which the PE staff in one of her case study schools expressed their disappointment that HRF was not identified as an activity area within the NCPE, the PE HoD explaining that, as a consequence, HRF would be 'lost' from PE. Furthermore, a PE HoD in a case study school within this research project considered that HRE linked all the components of the NCPE. This is consistent with Kirk's (1988) view that:

...part of the popularity of this emerging health focus in PE lies in teachers seeing at last a way of bringing together the traditionally disparate content of the subject, and of unifying this subject matter under one clear goal - health (p. 122).

The potential for HRE to unify and co-ordinate the PE experience (and, indeed, the counter argument that it could distort and fragment the subject of PE) is returned to later in this Chapter (Section 2, 7.3.4).

The finding that the HRE input within the PE curriculum had increased since the introduction of the NCPE in approximately a third of schools is consistent with earlier research findings (Penney, 1994). In Penney's study, of twenty-seven PE HoDs in one LEA in the South of England reporting a change in curricular PE in 1990/91, seven specifically reported developments in HRE/HRF, and eleven specified this as an area of development for the following academic year (p. 250). In addition, two of Penney's (1994) case study schools specifically highlighted HRF as an area of curriculum change (p. 246). Penney (1994) stated that, at the time of her research, HRE appeared to be an area of development rather than contraction, although it remained to be seen whether the impact of the NCPE would affect the time devoted to HRE. This research project which took place a few years later suggests that HRE continued to be an area of development within the early years of the NCPE.

However, although attitudes towards HRE were mostly positive and the HRE input had increased in up to a third of schools, a similar proportion had not yet committed themselves to paper with respect to schemes of work for HRE and, in over seventy per cent of schools, the organisation of the teaching of HRE was described as only partially structured or even unstructured. Where written schemes of work incorporating HRE were available, as in two case study schools, these generally referred to the content of pupil booklets utilised within discrete HRE modules at KS three. There was minimal attention to the incorporation of HRE concepts within the activity areas and limited attention to HRE within schemes of work for KS four. This begs the question as to the nature and extent of the links between the HRE concepts delivered in discrete units and pupils' other PE experiences. This same question has been posed by researchers in the area (Curtner-Smith et al., 1995, 1996; Harris, 1994, 1995; Penney, 1994; Penney et al., 1994a, 1994b, 1994c), and the issue has been commented upon in recent school inspection reports in England (OFSTED, 1995, 1996a) and Wales (OHMCI, 1995). The research findings also suggest that the HRE requirements for KS four which focus on planning, implementing and evaluating a

personal exercise programme, are only minimally addressed in some schools. Clearly, teachers require guidance with respect to curriculum planning for HRE, and assistance in translating the HRE requirements of the NCPE into coherent and workable schemes and units of work.

In the past, PE's contribution to health has been somewhat implicit, a by-product of participation in physical activity rather than a directly planned for and intended outcome (Kirk, 1986). Indeed, PE's contribution to HE has previously been described as 'very limited' in some schools, sometimes taking the form of 'spasmodic wet day sessions' (Cowley et al., 1981, p. 134). However, although PE's contribution to health is now required to be part of a planned PoS (DfE & WO, 1995), the situation described in one case study school which was claiming to deliver HRE solely through the activity areas, was that health-related work was confined to occasional coverage (a) for all pupils when the usual PE programme was disrupted, and (b) for non-participants. This suggests that in some schools HRE provision remains partial and incomplete. This type of 'incidental' approach has been criticised by both HE and HRE advocates on the basis that health-related issues are too important to allow their teaching to depend upon unplanned and haphazard treatment (Fox, 1992; Johnson, 1981). However, it has been suggested that a tradition of incidental teaching in health matters could possibly run counter to the need for a carefully planned programme (Cowley et al., 1981). For example, some teachers may prefer the flexibility, and have belief in the adequacy, of delivering health information on an occasional and informal basis to whom and when it is deemed to be appropriate. This may account for the apparent reluctance of some physical educators (such as those in one case study school) to plan and structure the HRE input to the same degree as other PE experiences. To some extent, it may also support the view expressed by Laventure back in 1988 that HBPE has not yet met with universal approval even within the profession and that there still remains a need to present a sequential and cohesive framework for teachers that will aid their curriculum planning, teaching and evaluation. Although the HPEP began to address these issues within its INSET programme during the late 1980s and early 1990s, this work remains to be continued. However, meeting this need is likely to be hampered by the absence of a lead body to pursue such developments.

7.2.2 Philosophy and Epistemology

The research findings clearly indicated that the specific statutory HRE requirements for secondary school pupils were considered important and relevant but that their interpretation and assessment were somewhat problematic for the majority of PE HoDs. Interpretation issues tend to revolve around the type of philosophical

questions previously posed about HE (Cowley et al., 1981) and which equally apply to HRE such as: What is it and what does it represent? What is its purpose and content? How is it to be organised and delivered, and who is to do this? Indeed, the literature suggests that there is no uncontested definition of health and no one way of looking at health or health issues. Health is a multi-faceted phenomenon, official definitions of which co-exist alongside lay beliefs, and it is relative to the surroundings and circumstances in which people find themselves (Aggleton, 1990; Seedhouse, 1986). Certainly, this has resulted in the articulation (and operationalisation) of health, and arguably of HRE, being a complex matter. In the past, attention has been drawn to the apparent lack of consensus and clarity about the definition of HE (Williams & Aspin, 1981) and HRE (Colquhoun, 1988; McNamee, 1988) as evidenced by the wide-ranging and differing subject content within the literature. McNamee (1988) views HRE as 'an attempt to effect an understanding and awareness of the health benefits of an active lifestyle, which aims to bring about a series of rational decisions, made autonomously by the individual, to engage in various forms of physical activity' (p. 83). This is not dissimilar to the more recent description of effective HE as associated with changes in knowledge, understanding, values, attitude, skills, and behaviour (Tones & Tilford, 1994). Similarly, HRE has been defined in cognitive, physical, affective and behavioural terms with respect to the knowledge, understanding, skills and attitudes associated with the promotion of health and well-being through active lifestyles (BAALPE, 1988; HPEP, 1991; U.S. Department of Health and Human Services, 1997). However, although such definitions exist for the area of work, teachers seem to find it easier to discuss and define HRE in terms of content, rather than philosophy, aims and appropriate methodology. The absence of a rationale for PE (and HRE) within the NCPE documentation (DES & WO, 1992; DfE & WO, 1995) would seem to have only exacerbated the problem.

In addition, epistemological problems persist with respect to establishing the nature and scope of those forms of thought and awareness that give HRE its identity and purpose. Indeed, resolving practical issues such as what schools should be doing and how, in order to best improve health through physical activity, raises problematic issues about the ethics of intervention. Intervention approaches to HE in schools have been categorised into a range of models, including the preventive (or medical) model, the educational model, the radical model and the self-empowerment model (Tones & Tilford, 1994). Velert and Devis (1995) provide a useful framework for applying medical, psycho-educative, and socio-critical models to HBPE (pp. 38-40). Cribb's (1986) view is that HE has gradually shifted from a concentration on hygiene and physical fitness towards the promotion of a 'healthy lifestyle' and, as a consequence,

the prevailing model has become concerned with changes in attitudes, values and skills. However, Tones (1987) remains critical of the lack of attention paid to the affective area within HE, and Cribb (1986) comments that the conservative curriculum with its emphasis on examinations, the lobby for traditional academic subjects, and relevance of education to the market place (with the latter narrowly viewed in terms of literacy and numeracy) places constraints on advancing a radical model of HE with such goals as self-empowerment, community action and self-help. Nevertheless, Tones and Tilford (1994) remain hopeful that the development of thinking and practice around the notion of the 'health-promoting school' may act as a stimulus to the adoption of more radical approaches to teaching health issues within the school curriculum.

The difficulty of the absence of a shared understanding of the purpose of HRE and what it represents is undoubtedly compounded by the fact that HRE is not generally seen as a priority due to its limited tradition in comparison with other PE activities, and to the sport and performance-oriented nature of the PE curriculum (Fairclough & Stratton, 1997; Penney & Evans, 1997). Indeed, it could be argued that, just as HE has been described as a 'cinderella subject' within the curriculum (Cowley et al., 1981), that is one which is 'everyone's concern but no-one's responsibility' (Scottish Education Department cited in Tones, 1987), similar could be said of HRE within the PE curriculum in that the rhetoric may imply status and value but the practice is somewhat superficial, haphazard and patchy. Indeed, back in 1987, Almond (with Dowling) commented that nearly all teachers believed that PE should involve itself in teaching about health, yet PE curricula revealed little evidence of a direct concern for health and fitness (Hill, 1986; Williamson, 1982). Furthermore, just as occurred with HE as a 'new' subject area within the curriculum (Johnson, 1981), HRE has had to argue defensively about 'taking' time from other aspects of the curriculum (such as the PE activity areas), many of which rarely seem to be subjected to similar scrutiny in terms of their relative value and importance.

The marginal status of HRE and its indeterminate, ambivalent and peripheral position within PE has undoubtedly not been helped by demands of new subject content and different teaching approaches. The point was made in the case study schools that part-time and/or older teachers might lack confidence in teaching HRE due to their limited knowledge of a 'new' area. Additional constraints which are likely to have affected the implementation of a comprehensive and effective HRE programme within the PE curriculum include: (a) its relatively 'new' existence as a subject, (b) the scientific and medical discourse which surrounds it and which may cause some teachers to lack confidence in delivering such content, (c) its requirement of

collaboration across activity area and subject boundaries as well as attention to the extended and hidden curriculum, all of which are demanding, and (d) a major focus being attitudes, values and social skills which require a substantial shift towards different teaching methods and modes of assessment. Issues relating to discourse, content and delivery are discussed further within the next section of this Chapter.

7.2.3 Section 1 Summary

In summarising this section on the rhetoric of HRE, it would seem that HRE occupies a paradoxical position within the PE curriculum in that, whilst some place high priority on the role of school PE in promoting positive health behaviours (DoH, 1992, 1996; Sports Council & HEA, 1992a, 1992b), there are at the same time pressures to expand attention to what might be described as basic disciplines within PE which tend to squeeze HRE into a marginal slot. Adopting Cribb's (1986) standpoint, one could argue that a major constraint on advancing a radical model of HRE lies in the conservative 'back to basics' PE curriculum with its 'focus on the essential 'grammar' of physical activity - competition, competence and control' (Evans & Penney, 1996, p. 31), its emphasis on performance and sport (often narrowly interpreted in the form of competitive games) (Penney & Evans, 1997), and the relevance of PE to the country with the latter seemingly viewed by some in terms of PE's role in the identification, selection and training of potentially successful world class performers. A further profound contradiction is that PE teachers:

'...are told by prominent educationalists and politicians that they hold the key to the nation's future health and wealth, especially if they promote more team games and sport in their schools, at the same time as curricular and resource changes tell them that they and their subject deserve less time, support and recognition than others (Evans & Davies, 1997, p. 186).

Allied contradictions include government policies encouraging the promotion of healthy practices but no place for HE or PSE as core or foundation subjects in the NC, and no place for HRE as an activity area within the NCPE. Yet, as commented upon by Tilford (1992), even if schools were to increase HE in the NC (and HRE in the NCPE), they may fail to develop and implement health-promotion policies for the school as a whole, and messages conveyed by the school environment and ethos may still serve to contradict messages from the formal curriculum (p. 127). Thus, key factors critical in developing HRE, such as sound cross-curricular links and an 'institutional' commitment, as is encouraged in initiatives such as the 'active school' (McGeorge, 1997) and the 'health promoting school' (Parsons et al., 1996), may be lacking in implementation of the NCPE. Indeed, in Penney's (1994) view, the 1988

ERA has reinforced subject divisions within the curriculum and accentuated competition between departments, the consequences of which are a school climate and structure which serve to constrain, rather than develop, collaborative developments such as those required to effectively deliver cross-curricular themes.

7.3 Section 2: The Reality of HRE

This section focuses on a discussion of HRE procedures and practices in schools in terms of organisation, theoretical and practical content, delivery and assessment.

7.3.1 Approaching Organisation

The literature on HE indicates that there are many ways in which the teaching of health issues may be organised in schools. For example, Johnson (1981) provides an extensive list ranging from the incidental approach, to the selection of partially co-ordinated topics, through to the implementation of a well planned programme established via a comprehensive internal process of curriculum development. Whilst it is evident that issues and matters associated with health can be organised as specific subject courses or as cross-curricular activities, Williams (1981) has suggested that these two methods should not be viewed as alternative ways of organising a programme because the second usually grows out of the first. He does, however, emphasise that such growth has to be nurtured and that this is notoriously difficult.

The survey results revealed mixed opinions regarding appropriate models for the delivery of HRE and that only a minority of PE HoDs considered that the HRE requirements could be effectively permeated through the activity areas alone, especially at KS four. A similar range of views were evident in each case study school, in which no one mode of delivery was favoured by all PE teachers within a department. Some favoured a totally 'permeated' approach in which HRE is filtered solely through the activity areas, whereas others preferred discrete units (in addition to some reinforcement through the activity areas). A reason proposed by several teachers for favouring permeation was that it avoids HRE being viewed as separate from other aspects of PE. Another view was that, with limited PE time, it might not be possible to include HRE in the form of discrete units. On this latter point, although there was no clear relationship within the case study schools between the time allocation for PE and the particular mode of delivery for HRE, in one school discrete HRE units had been previously 'dropped' as a consequence of a reduction in PE curriculum time. Thus, it would seem that time allocation can be a key factor influencing PE curriculum design. However, clearly it is one of many factors including department philosophy, staff expertise, facilities and funding, and it was noted that the case study school with the least curriculum PE time maintained an

organised and structured HRE programme. With respect to the time allocation for discrete HRE units, the most common format was one half-term block of six to seven lessons in a year, although this was not necessarily provided annually. These findings fall short of the target suggested by the HPEP (1987b) although are similar to the findings of Penney et al. (1994c) in which HRE units in secondary schools in one LEA were typically of five to eight weeks duration. The fact that the majority of the HRE units were delivered during the Autumn and/or Spring Terms was most likely due to such units generally being allocated an indoor activity space during periods where inclement weather could be anticipated in England.

A further interesting finding was that in the case study schools which delivered HRE in units, several teachers expressed the view that, in terms of planning, discrete units were simpler and, to them, represented a more organised approach. This suggests that teachers have experienced (or perceive there to be) difficulties with a fully permeated approach and have consciously made the decision to opt for what they consider to be an easier and/or more effective approach. Given the views expressed above, it is perhaps not surprising that the survey findings revealed a range of approaches to the organisation of HRE within the curriculum with most PE HoDs teaching HRE through the activity areas, the majority also teaching HRE in discrete units, and approximately half claiming to teach HRE partly in PE and partly elsewhere in the curriculum.

7.3.2 HRE Units: Isolated or Unifying?

Compulsory HRE units were in evidence in nearly sixty per cent of schools at KS three and in just over a third at KS four, with less than ten per cent teaching HRE solely through the activity areas. These results are similar to those of Penney et al. (1994c) who found that eighty-eight per cent of secondary schools in one LEA in the South of England identified HRE within PE but less than a quarter described it as a continual part of their curriculum. Instead, just over eighty per cent of them included HRE as a discrete area in their year nine PE programmes, and nearly seventy per cent (almost fifty per cent compulsory and twenty per cent optional) did likewise for year eleven. A further survey in 1993 revealed that sixty-three per cent of schools provided HRE as a discrete unit in year seven (Penney, 1994). Whilst acknowledging the possibility of some small reduction in the percentage of schools delivering HRE in discrete units between 1991 and 1993, Penney (1994) recognised that these figures revealed that, in most secondary schools, HRE was more often a discrete component within PE rather than a 'permeated' cross-curricular theme. According to Penney and her colleagues (Penney, 1994; Penney et al., 1994c), this provision of HRE/HRF as a distinct area of activity within curricular PE contrasted to, and was not totally

compatible with, the emphasis within the NCPE in which HRE was presented as a permeating theme rather than an activity area. This raised critical questions for the researchers about the delivery of HRE within the NCPE such as how and whether key principles delivered in HRE modules were actively applied throughout other aspects of the PE curriculum. As previously mentioned and further addressed in this section (7.3.3-7.3.4), this is a key pedagogical issue. However, the suggestion of incompatibility with the NCPE text implies an interpretation of HRE as a 'permeating theme' focused solely on the procedural issue of organising it in a specific way within the curriculum (ie. teaching HRE through the activity areas only). Indeed, this interpretation is also that presented within the NC documentation on the cross-curricular themes (NCC, 1990, pp. 26-28) and within the draft proposals for the revision of the NCPE (SCAA, 1994a, p. ii). However, a 'procedural' only view of 'permeation' is clearly limited since it may also be interpreted in a broader substantive (as opposed to structural) sense in terms of HRE underpinning the PE experience. A substantive interpretation of 'permeation' permits more scope with respect to its organisation within the curriculum.

The trend towards discrete HRE units in secondary schools may partly reflect fears expressed about HRE (Fox, 1992; Harris et al., 1991) over its somewhat threatened position as a permeated element and the effect this may have on current and future health-related initiatives. In particular, many PE HoDs had during the previous decade invested much time, energy and resources into the planning and development of HRE/HRF modules within their PE programme. Therefore, it was not likely that they would willingly or quickly replace these for an alternative approach which could be found to be less effective, more problematic and which would require further investment of limited resources. The rationale presented in two case study schools for teaching HRE in discrete units throughout KS three was founded on the perceived importance of health, its close relationship with PE and the desire to avoid the area being marginalised. One PE HoD also considered that HRF lessons represented a structured and sound theoretical and practical base for other PE activities. Additional influencing factors in one case study school were the school's approach to cross-curricular themes, and the views of colleagues and the PE adviser. In particular, the departmental approach had been greatly influenced by the presence of a PE teacher who was knowledgeable about HRE and willing to design a curriculum programme. However, in another school in which HRE had been previously delivered in discrete units, reasons given for not continuing with this approach related to a reduction in PE time, but also to views of HRE as a 'fringe aspect' of PE, and the belief that pupils would benefit more from 'fully practical' PE lessons. Clearly, within this particular school, HRE was generally viewed as having relatively low status within PE (that is,

of less importance than the activity areas) and its content and delivery were perceived in a particular way (that is, more theoretical than practical). Issues relating to content and delivery are discussed later in this section (7.3.3-7.3.7).

It seems appropriate that the vast majority of schools had predominantly practical HRE units since learning through engagement in activity is consistent with the physical context of the subject (DES & WO, 1992; DfE & WO, 1995), and with evidence relating health benefits to physical activity participation (Blair & Connelly, 1994). PE professionals themselves (Laws & Smalley, 1994; Wilgose, 1993; Woodhouse, 1988e), including the teachers within this research, have commented on the need to balance theory and practice and to ensure that PE lessons are predominantly active because of the perceived (if not actual) (a) preference of both pupils and staff for active work, and (b) low activity levels of pupils outside of school. It was suggested in one case study school that the HRF course was possibly too theoretical and needed to be more practical to maintain the interest of younger and less able pupils. These findings suggest some degree of reluctance by physical educators to increase the cognitive component within PE in the belief that this would inevitably result in decreased activity within PE lessons. Indeed, Tinning and Kirk (1991) are critical of the fact that daily PE in Australia was sold on the basis of a health and lifestyle rhetoric yet the discourse has tended to omit any appreciation that young people should develop some understanding of the connections between exercise, fitness and health. However, it is interesting to note that some of the HRPE programmes within the review detailed in Chapter 2 (Section 4, 2.5) incorporated elements of classroom based theoretical instruction or involved distinct theory and practical components (Goldfine & Nahas, 1993; Jones, 1990; Youldon, 1988). Whilst believing the cognitive element to be a vital component of HRPE programmes, sedentary classroom delivery of HRE concepts based solely on information transmission is likely to be less effective than a more practically-oriented approach to delivery, combining understanding, experiencing, decision-making and evaluating (Harris and Elbourn, 1992). There appears to be a need for resources and training which focus on the effective integration of theory and practice, permitting high activity levels and personal involvement in learning.

With respect to attitudes towards HRE programmes, claims were made that staff and pupils in the two case study schools with discrete HRE units, enjoyed them. Indeed, one PE HoD considered that the emphasis on enjoyment in HRE represented a way of appealing to pupils. He associated positive pupil responses with the range of non-conventional 'fun' activities offered and believed that these appealed in particular to 'less able' pupils. Penney (1994) also commented that the popularity amongst pupils

of a newly-introduced HRF module in one of her case study schools was such that it seemingly resulted in changing the initially negative attitudes of some of the PE staff towards the area of work. However, PE staff in two case study schools in this research project also referred to some initial resistance to the HRE units from a small proportion of pupils because the approach differed from their usual games-playing lessons. A similar situation of pupil 'resistance' and 'dissonance' was found within a HBPE programme within the Spanish curriculum (Velert & Devis, 1995, p. 47). The possibility of some initial resistance to HRE units had been alluded to by Almond (with Dowling, 1987) who considered that the use of resources requiring different teaching methods were likely to have repercussions on pupils who were used to a particular way of working in PE. Indeed, negative attitudes of pupils towards 'fitness-related' activities have also been documented by others (Luke & Cooper, 1994; Luke & Sinclair, 1991; Tannehill & Zakrajsek, 1993) although it would seem that such attitudes relate more to the delivery than to the content per se. For example, Luke and Sinclair (1991) found that running activities and fitness testing were viewed very unfavourably by many adolescents, and they urged teachers to find new ways of presenting such activities in order to avoid a deterioration in attitude which would contribute little to lifelong physical activity habits. Similarly, in discussing their findings that nearly three-quarters of secondary school (and especially older) pupils commented upon poor experiences with fitness activities, Tannehill and Zakrajsek (1993, p. 83) stated that, in the USA, fitness work is generally one of the most neglected aspects of the PE programme where planning is concerned, and advised that teachers address fitness with a positive and motivational approach that demonstrates the outcomes and benefits of PE. As highlighted by Almond (1983, 1997), the above implies mismatches between rhetoric and reality, policy and practice, intentions and outcomes, and suggests a need to address key pedagogical issues in the teaching of HRE.

Following on from a consideration of pupils' experiences of fitness activities, it is interesting to note that the review of HRPE programmes (Chapter 2, Section 4, 2.5) revealed limited detail regarding specific intervention protocols. Where the content was outlined, however, programme activities generally included vigorous cardiovascular exercise (such as running) which it would seem is not especially popular amongst some young people and, whilst it may have the desired effect of positively influencing short-term fitness gains, it may not be so successful in promoting long-term involvement in physical activity. Pangrazi (1994) believes that 'little is gained if students are trained physically but develop a negative feeling about the experience' (p. 80). Additionally, in the review by Simons-Morton et al. (1988), it was noted that one primary (Duncan et al., 1983) and one secondary (Cooper et al.,

1975) study similarly reported some initial resistance by children to the intensity of programmes. In considering why HRE might be delivered in this way, it may be that the purpose of HRE is narrowly viewed as 'getting pupils fit', rather than the promotion of active lifestyles through the delivery of relevant understanding and skills transmitted through positive physical activity experiences. In this respect, it is evident that the delivery of HRE is as important, if not more so, than its content. Clearly, it is desirable that teachers are familiar with the rationale for exercise recommendations for young people (Corbin et al., 1994; HEA, 1997c; Pate & Trost, in press; Sallis & Patrick, 1994a, 1994b) which, in line with those for adults (ACSM & US CDCP, 1993; Killoran et al., 1994), emphasise the health benefits of moderate intensity exercise (in addition to those of more vigorous exercise) as well as the appeal and desirability of lower level activity, especially in meeting the needs and desires of unwilling and/or disadvantaged individuals (Owen, 1994). Indeed, it is possible that PE teachers' lack of awareness (and perhaps belief) that vigorous activity is unnecessary for health benefits (cardiovascular or otherwise) may represent a major limiting factor in the potential effectiveness of PE in activity promotion.

7.3.3 Permeation in Practice or in Pieces?

Although HRE was reported to be delivered through each of the six NCPE activity areas, only about half of PE HoDs claimed to be teaching HRE in a structured way through athletics, and only a third claimed to be doing so through games and gymnastics. The slightly higher percentage of HRE teaching through athletics suggests that teachers see a closer association between health concepts and athletic activities. Curtner-Smith et al. (1996) similarly found that teachers included more HRF content in track and field lessons than in games and swimming. This may be as a consequence of an interpretation of HRE in the form of preparation prior to energetic athletic activities as evidenced by frequent references to 'warming up' within the case study interviews and PE schemes of work. In one case study school, reinforcement of HRE ideas through the activity areas was described in terms of warming up, fitness requirements, and older pupils having more responsibility in lessons. A further possible reason for the closer link between HRE and athletics is the perceived association between the activities of running, jumping and throwing, and the three 'S's (stamina, strength and suppleness) which, along with body fatness, are referred to as health-related components of fitness (Corbin & Lindsey, 1983).

The relatively high proportion of unstructured HRE teaching through the activity areas raises issues relating to the effectiveness, consistency and coherence of pupil experiences. Indeed, the survey findings and the following quote from a teacher in

one case study school certainly suggests that some degree of lip-service is being paid to the delivery of HRE:

...I personally talk off the top of my head where it arises...everything that is done, I would say really is done separate...Generally speaking it's hit and miss. We have all the information to put forward to the kids but we don't actually have a structure... (AF1:103-115).

Recent inspection reports from England (OFSTED, 1996a) and Wales (OHMCI, 1995) have commented upon limited incorporation of health and fitness considerations within normal PE lessons, and research findings (Curtner-Smith et al., 1995, 1996; Harris, 1994, 1995; Penney et al., 1994a, 1994b, 1994c) support the suggestion that minimal teaching of HRE concepts occurs through the activity areas. Despite some issues associated with the application of the observation instrument used by Curtner-Smith et al. (1995, 1996) within PE programmes in England (see Harris, 1997), their findings indicated that pupils spent little time in moderate to vigorous physical activity (MVPA) likely to promote health benefits, that teachers allocated no time for pupils to engage in fitness activities or receive fitness knowledge, and that teachers spent no time directly promoting or demonstrating fitness. Research findings clearly highlight the limitations of a 'permeation-only' model for the delivery of HRE, and, to some extent, confirm what the health 'lobby' had feared in the development of the NCPE, that there was no guarantee that as a 'permeating' theme, health would find a place in the PE curriculum in schools (Fox, 1992; Harris et al., 1991). Indeed, it has been suggested that secondary school PE in England has remained largely unaffected by the HRE movement (Curtner-Smith et al., 1995, 1996). Furthermore, Curtner-Smith et al. (1995, 1996) have proposed that different activities are assessed in terms of their health-related contribution and that new methods for teaching such activities are designed.

In considering why there is a lack of structured HRE delivery through the activity areas, the research findings suggest a number of potential contributory factors, these being: (a) HRE perceived as low priority within the NCPE and thus receiving less attention than the activity areas, (b) inadequate understanding of health-related concepts and experiences and how these might be delivered through the activity areas, (c) reluctance to amend or interfere with the teaching of the activity areas, (d) insufficient motivation and/or time for liaison with colleagues and, (e) the perceived or experienced difficulty and/or ineffectiveness of delivering HRE concepts through the activity areas. It may be that HRE modules in a way protect the activity areas as they allow the areas to be left as they are, untouched, or only minimally affected by

the introduction and development of HRE within the PE curriculum. As a consequence, HRE is often approached as a 'tagged-on' addition to, rather than an integrated element of, the PE curriculum.

7.3.4 The Delivery Debate: Permeation or Modular?

The most common method of delivery adopted by just over a third of schools was a combination of approaches involving discrete units in PE, integration through the PE activity areas, in addition to teaching through other areas of the school curriculum. This combined approach was adopted within two case study schools. In these schools, the approach to teaching HRE within PE was established following a departmental discussion about the relative advantages and disadvantages of the different modes of delivery. A combined approach was seen to permit the highlighting of key concepts and experiences in discrete units in PE, the integration of the knowledge base through the PE activity areas, and the creation of vital links with other aspects of HE within the wider curriculum. It seems reasonable that the decision as to the most effective mode of delivery for HRE within a particular school context be made by those professionals responsible for the area, usually the PE staff in conjunction with those responsible for HE. This degree of flexibility is considered preferable to cajoling professionals to adopt one particular approach such as the permeation model (PEA, 1995), without a clear rationale for such direction, and with limited evidence of previous effectiveness. In the case study school in which HRE was incorporated within the activity areas, the staff recognised that this approach required greater organisation since each PE teacher addressed HRE in their 'own way', and with limited awareness of how it was being delivered by other PE teachers in their department. Indeed, where the integration of HRE within the activity areas was concerned, this was also the situation in the other case study schools. There was little evidence of a well planned and co-ordinated approach to integrating HRE within the activity areas in both schools with and without discrete HRE units. Also, given that the survey results revealed that, in most schools, HRE was taught by the entire PE department, and, in many schools, was also taught by staff from other departments, some consistency in approach is clearly required in order to ensure that all pupils have access to similar messages and experiences. A shared philosophy and planned structure will undoubtedly help to improve coherence and relevance and minimise the potentially fragmented learning experiences of some young people (Harris, 1993, 1994b).

The debate over the appropriate organisation for the delivery of HRE has been ongoing since the early 1980s (see Chapter 2, Section 5, 2.6.4). In its most simplistic form, it is presented as a question of a 'permeation' versus 'modular' approach to the

area. In 1981, Wright stated that it was 'necessary for particular blocks of work to be tackled which 'home in' on health-related aspects of PE' (p. 167), and more recently, Fox has expressed the view that the only meaningful way of delivering HRE is in discrete units (cited in SCAA, 1997a, 1997b). However, an OFSTED inspector has admitted to some confusion regarding HRE in the NCPE and stated that, in his opinion, teaching HRE in focused units is 'contrary to the statutory requirements' (Oxley, 1994, p. 39). This statement has been challenged by HRE advocates (Harris & Almond, 1994) who have suggested that much of the confusion is associated with an underestimation of the knowledge base associated with the area, and a lack of awareness of the variety of ways in which this can be effectively delivered within the PE curriculum. In addition, Harris and Almond (1994) point out that the NC specifies content, not delivery, and that previous NCPE documentation recommends flexibility in determining how HRE can be effectively delivered (DES & WO, 1991b, p. 62). In their view, there is no guarantee and indeed limited evidence from the past that 'permeated' HRE will bring about quality delivery of health issues within PE. They consider it 'wise of teachers to seek the most appropriate methods of effectively delivering the HRE requirements' and 'unwise of professionals to preach a gospel which is less than accurate and may serve to impoverish the physical education experiences of many young people' (Harris & Almond, 1994, p. 68). In addition, communication from teachers to the HPEP claimed that a few PE inspectors were suggesting that there should be a shift from delivering HRE in discrete units towards teaching it solely through the activity areas. This exemplifies the conflicting guidance about HRE that has been offered within the PE profession. Of particular concern is the apparent resistance to, and lack of support for HRE from some key individuals within the profession, evident from previous comments (see Talbot cited in Mannseur, 1992) and those made more recently in which fears have been expressed that discrete forms of HRE are 'fragmenting' and 'distorting' the subject of PE, and where much of the content of HRE units was described as poor practice (SCAA, 1997a, 1997b). A particular issue seems to revolve around the 'practical content' of HRE, some physical educators considering that the area focuses almost solely on the cognitive and affective domains, and thus can be delivered through the processes of pupil planning and evaluating within the NCPE activity areas, and should, or need not involve additional or 'invented tasks'. The concern seems to be twofold: (a) that HRE units within the PE curriculum remove time from the activity areas and, as a consequence, adversely affect achievement within these areas, and (b) that much of what is delivered in the name of HRE has limited educational value. In effect, it would seem that some key professionals do not like what HRE they see and neither do they like how it is affecting other (and, presumably in their view, more important) aspects of PE.

In one respect, the existence of HRE modules within PE may reflect teachers' lack of faith in a permeated approach. For example, some physical educators believe that planned permeation is difficult and serves to 'crowd and confuse' the purpose of lessons (McKenzie, 1994, p. 52). On the other hand, it is possible that it also highlights the limitations to the 'changes' that have occurred in accommodating the NCPE requirements. Significantly, health has not necessarily become a focal point for PE, but rather a module within it, thus permitting other activities within PE to remain essentially unaffected. Clearly, there is a need for a more coherent approach in order that there are close links between HRE concepts delivered in discrete units and experiences within the activity areas. This point was well emphasised by Penney (1994) in one of her case study schools in which, although the headteacher stressed that he wanted HRF to be '...woven in, not as a 'bolt-on' thing', the PE HoD acknowledged that there was still a strong skills emphasis in the PE curriculum and that there was a need to address the integration of HRF into other areas of PE (Penney, 1994, pp. 272-273). Indeed, both BAALPE (1994) and the PEA (1994) have questioned the compatibility of a games-dominated curriculum and the promotion of HRE, and BAALPE (1994) has requested that the provision for HRE be addressed, particularly the place of more discrete HRE at KS three and four.

Before moving on from the HRE delivery debate, it is interesting to note that approaches to HRE differ within Great Britain. For example, the NCPE for Northern Ireland (Department of Education Northern Ireland, 1996) stipulates that KS four pupils should experience a balanced programme of PE and should be required to participate in health-related PE and a minimum of three different activities (p. 11). Interpretation of this by PE teachers and advisers is that the HRPE component is to be delivered as a discrete element at KS four (Mahoney, 1993). This interpretation has been supported by resources in the form of a video and booklet provided free to secondary schools and followed up with a comprehensive INSET programme. Discussions with advisory teachers and PE HoDs in Northern Ireland indicate that a compulsory unit of HRPE at KS four is appreciated by teachers and pupils in terms of its relevance and the flexibility it offers to incorporate a range of lifetime health-promoting activities.

7.3.5 The Theory of HRE: Moving Beyond the Basics?

The research findings revealed that terminology for the 'health in PE' area varied with fitness-related terms being used in the vast majority of schools and by most PE staff in the case study schools. Issues have been raised about the appropriateness of such

terms given the weak association between children's fitness and activity levels (Armstrong et al., 1990a, 1990b), the evidence linking activity, rather than fitness, with health (Fox, 1991), and young people's potentially negative perceptions of fitness (Harris, 1993, 1994b). Given these issues, it may be prudent for teachers to adopt the term 'health-related exercise' or 'health-related physical activity', or to use terms qualifying 'fitness' such as 'fitness for life' or 'fitness for health'. However, only about a quarter of PE HoDs used the term 'HRE' although this did represent a small increase from the fifth of PE HoDs adopting this term in the earlier pilot study (Harris, 1994d). This increase is most likely due to increased familiarity with NC documentation in which the term HRE has been adopted (DES & WO, 1992; DfE & WO, 1995; NCC, 1990).

For the majority of PE HoDs, the knowledge base associated with HRE focused predominantly on the areas of stamina, strength and suppleness, including compulsory testing of these components. A closer look at the knowledge base underpinning the HRE programmes in the case study schools indicates some differences in the range and depth of the content covered. For example, the following theoretical components were common to all case study schools: stamina, flexibility, warming up, and healthy diet (body fatness). Further, in each school, 'flexibility' was delivered mostly through warm ups. Strength work and fitness testing were included in two schools and cooling down was mentioned in just one school. Issues relating to hygiene, safety, performance and training were also included in one school. One teacher considered that first aid and lifesaving could be incorporated within HRE units, and an NQT was keen to include sports injuries and links with other health behaviours (such as smoking, drugs and alcohol). The findings suggest that there is consensus on some theoretical areas but not on others. A further variation between the schools was in the level of detail covered. For example, in one school 'stamina' incorporated awareness of the basic effects of exercise on the body, whilst in another school much more detail was covered involving an understanding of a wide range of effects on the cardiovascular system, including the distinction between aerobic and anaerobic exercise. Thus, where a knowledge base is delivered, this tends to be relatively broad in range but basic in depth and crammed within short discrete units, an approach which could potentially lead to predominantly inactive lessons. This situation might be alleviated by delivering the knowledge base over a longer period of time within predominantly practical lessons. In effect, it would seem that the flexibility inherent in the NCPE has permitted 'accommodation' of the HRE requirements such that they may be interpreted at any level that suits the capabilities and confidence levels of teachers. It appears that pragmatic matters may be limiting and possibly over-riding educational considerations such as pupils' needs.

It is a concern that only half of schools incorporated personal exercise programming within their HRE schemes of work since this requirement is explicitly stated within the NCPE at KS four, and it has been found that many pupils lack knowledge and understanding in this area (Underwood, 1988; Underwood, Bird, & Farmiloe, 1993). Furthermore, although each of the case study schools addressed this area, staff acknowledged that a minimalist approach had been adopted, which seems to reflect some uncertainty as to the interpretation and implementation of the KS four HRE requirements. It may also reflect some scepticism about its value and/or some concerns about its manageability, as was suggested by a teacher in one case study school who had attended an INSET course covering this aspect and described it as complex and time-consuming. Velert & Devis (1995), working within the Spanish PE curriculum, agree that personal exercise programming is a 'motivating, rewarding and enriching experience' but one that also 'requires time and dedication' (p. 45). In addition, the fact that only a minority of PE HoDs in the author's study considered that the HRE requirements could be effectively permeated through the activity areas alone at KS four, suggests that the uncertainty is linked to perceived difficulties in effectively 'permeating' this particular aspect of HRE through the PE curriculum. Indeed, in its response to the revised NCPE (DfE & WO, 1995), the PEA (1995) requested clarification as to the sport and/or non-sporting content of a personal exercise programme and whether it should be delivered through the two required activities at KS four or through discrete HRE units (p. 3). A similar scenario occurred within a HBPE programme in the Spanish PE curriculum (Velert & Devis, 1995).

It is also a concern that only a minority of PE curricula incorporated 'weight management' and 'stress management', especially as these issues are highlighted within the HRE component of the HE recommendations. Although each of the case study schools incorporated the role of activity in weight management within the PE curriculum, this was described as limited. The findings suggest that the HRE component of HE within the NC is not, or is only minimally, addressed within PE in most schools. With the recent evidence that obesity is increasing in England (Hughes et al., 1997; Prescott-Clarke & Primatesta, 1997), it would seem prudent to ensure that young people are provided with a sound education about the role of physical activity in the maintenance of weight within a desirable health range. This may be considered a somewhat complex and contentious issue, and the PE profession must beware of over-emphasising the normality of the 'active mesomorph' (Evans & Clarke, 1988) and contributing to the 'cult of slenderness' (Tinning, 1985) and the pursuit of a 'youthful, trim and sensual body' (Shilling, 1993). However, it is nevertheless important given that limited understanding of safe and effective weight

management has undoubtedly led to individuals being ill-informed, with the potential for them to be misled by commercial groups who may be more interested in their wealth than their health (see also Velert & Devis, 1995). Furthermore, young people should be helped to question and challenge media presentations of the body and physical health. Increasing attention is currently being paid to the importance of physical activity in the prevention of overweight and obesity (HEA & Association for the Study of Obesity (ASO), 1997; Ottley, 1997), and the DoH is developing a major school-based multi-component health initiative focusing on educating young people about 'food and physical activity' (L. Almond, personal communication, September 1997).

With respect to the value placed upon the theoretical content of HRE, Hardman (1989) has stated that:

X The curriculum must attempt to convey an understanding of key concepts such as the relative intensity of exercise, adaptation and energy balance, which are essential to making practical decisions concerning the nature, intensity and duration of exercise needed to confer health benefits (p. 3).

In considering the origins and development of curriculum-based theory, Kirk (1992) provides a reminder that school knowledge is not fixed or neutral, rather it is constantly in process, shaped by social, political, cultural and educational forces (p. 2). This issue is highlighted by Wortley's (1994) assessment of the HRE requirements of the NC as emphasising physiological functioning (especially stamina), and underplaying personal and social development which, in her view, represents an over-simplistic approach to the multi-dimensional concept of health. Wortley (1994) would like to see greater acknowledgement of the problems associated with changing individual health behaviour and of the reality that many people reject activity because they neither enjoy nor value it. She would also like to see much more attention paid to factors influencing active lifestyles such as home and family background, peer group pressure, and social circumstances. Certainly, the theoretical emphasis of some (though certainly not all) HRE literature on fitness and training concepts (eg. Brodie, 1988, 1990) indicate that 'scientific functionalism' and 'technocratic rationality' tend to perpetuate as dominant discourses with the focus on physiological, rather than psychological, social, emotional and moral, concerns. A critical evaluation of a recent HRE resource (Royal Navy, 1996) similarly concluded that the dominant discourses expressed were those of 'scientific functionalism' and 'technocratic rationality' (Elbourn, 1997). A physiologically-based 'fitness and training' approach with a focus on high level technical knowledge and 'measurable'

physical skills is likely to privilege the skilled over the less able and factual knowledge over feelings and attitudes.

With respect to cognitive and behavioural domains, the Sports Council (1993) has stated that: 'Young people...need knowledge about opportunities in the local community and the skills to access those opportunities. The PE national curriculum provides the only opportunity for all children to receive a sound introduction to participation' (p. 39). The Active Lifestyles Project was cited as an 'excellent model of what can be done in this field' (ibid, 1993, p. 39). However, a criticism which has been levelled at HRE initiatives for some time is that they have largely ignored or only implicitly recognised socio-cultural and behavioural factors (BAALPE, 1988; Tinning, 1994). In a review of HRPE programmes in schools by Simons-Morton et al. (1988), no studies were found which reported affective outcomes relating to physical activity. This led the reviewers to recommend that a major focus in evaluating enhanced PE programmes should be on behavioural aspects of, and dispositions towards, physical activity. Similarly, Colquhoun and Kirk (1987) advised that the affective domain should be acknowledged since information alone cannot necessarily alter behaviour. Affective outcomes have been monitored in a number of secondary HRPE programmes (Caldecott, 1988; Goldfine & Nahas, 1993; Green & Farrally, 1986; Jones, 1990; Youldon, 1988) but have not been addressed in many others. In recognition of a range of influences on young people's physical activity behaviour, a few programmes have involved the family in helping to increase the activity levels of children (Abbott & Farrell, 1989; McKenzie et al., 1996; Taggart et al., 1986), and the SPARK (Sports, Play, and Active Recreation for Kids) and CATCH (The Child and Adolescent Trial for Cardiovascular Health) projects (McKenzie et al., 1993, 1996) have aimed at developing children's behavioural as well as physical skills. In addition, some programmes are part of large-scale multi-component interventions addressing a range of health risk factors and behaviours and involving links with significant persons within the family and community (McKenzie et al., 1996; Simons-Morton et al., 1988; Walter et al., 1988). It seems, however, that there is much more potential and scope to explore socio-cultural and behavioural factors than has occurred to date.

7.3.6 Practical HRE: Dreary Drill or Appealing Activity?

Most schools offered a variety of health-related activities (especially cross-country running, circuit training and aerobics) within curricular and extra-curricular programmes. In the main, cross-country running and circuit-training were compulsory whereas aerobics and weight-training were more likely to be optional or extra-curricular activities. The case study findings similarly demonstrated these

trends with older pupils being introduced to or offered activities such as gym-based weights work, aerobics and/or step aerobics (offered to girls only in two case study schools and selected by girls only in another school) and weight-lifting (offered to boys only in one school). In one case study school, all year ten pupils followed an accredited module which involved utilising local sports facilities, and there were future plans for optional fitness courses for KS four pupils using the school's new fitness facility.

It is interesting that activities such as cross-country running, circuit-training and aerobics were offered in most PE curricula despite them not being specifically mentioned within the NCPE and there being no obvious place for them within the six activity areas (DES & WO, 1992; DfE & WO, 1995). One case study teacher justified the inclusion of activities such as aerobics and step aerobics on the basis that they could be enjoyed by pupils (particularly older girls) of all abilities and were likely to be continued after leaving school. A teacher from a different case study school considered that older girls enjoyed 'working out' and another teacher stated that girls viewed fitness work as different from the other PE activities, more as an 'adult' form of exercise. In her opinion, such fitness activities represented a way of maintaining girls' interest in PE. Thus, it would seem that many PE teachers appreciate the appeal of these activities for some pupils (especially girls) and value the link with exercise forms that can be pursued into early adulthood. Indeed, this point was alluded to in 1981 by Wright who considered that 'if properly organised and taught, with suitable music, such keep fit programmes can be exhilarating and popular' (p. 168). Further, recommendations have previously been made in America for school PE programmes to emphasise 'lifetime' activities and to decrease time spent teaching team sports (Committee on Sports Medicine and Committee on School Health, 1987), and one of the U.S. health objectives for the year 2000 is to increase the time spent in PE lessons on 'lifetime' activities which are those that may be readily carried into adulthood (Caspersen, 1994). The appeal of such activities is supported by Dickenson and Sparkes' (1988) research which indicated that:

the needs of many pupils...can be described as wanting to relate to physical activity on a personal level, free from pressures of results, performance or peers, without the constraints of a high level of technical competence and, particularly for older pupils, without the need to compete against others.

It seems unfortunate that such research findings appear to have been overlooked or dismissed during the development of the NCPE in which competitive games is compulsory for all KS four pupils (DfE & WO, 1995), and may run the risk of turning

some young people, in particular girls, away from exercise (Dickenson & Sparkes, 1988; Goudas & Biddle, 1993; Hendry et al., 1995).

In addition to the appeal of individualised lifetime activities, their educational value is related to their appropriateness as contexts for learning HRE concepts. Back in 1981, Wright presented a critique of current practice in stating that the emphasis in PE 'should be on enjoyable participation for all rather than on the traditional cross-country racing pattern which tends only to be appropriate for a minority of pupils' (pp. 166-167). More recently, an OFSTED inspector has been critical of situations in which cross-country and circuit training are listed in schemes of work without any reference to the statutory requirements (Oxley, 1994). Within the context of the NCPE, it might be anticipated (although should not be presumed) that such activities, delivered in curriculum time, would be associated with the delivery of the HRE requirements and would be offered, either within related activity areas (such as cross-country running within athletics activities) or within discrete HRE units. However, it may be a concern that just over a third of PE HoDs described their HRE units as solely activity-based, since this could imply that pupils are engaged in activity sessions with limited learning. The situation may be even more of a concern where an entire unit may be predominantly teacher-directed, there is minimal involvement of pupils, and where the delivery of the activity experiences may prove negative for some pupils. One would certainly have to question the educational value of half-term units of cross-country running, aerobics or circuit-training which involve a minimal cognitive element. The situation occurring in one case study school of totally self-directed aerobics (in the sense of unsupervised pupils following aerobics videos) is an example of questionable educational practice. Activity without learning is clearly inadequate within an educational context. In Almond's (1997) view, the 'missing ingredient' is pedagogy in that the critical issue is not the activity per se, but the learning that does or does not take place within the context of the activity.

In considering why certain physical activities such as cross-country running, aerobics, circuit-training and skipping are particularly associated with HRE, there seem to be several possible reasons. One is that they are viewed as lifetime health-promoting individualised activities which are enjoyable, can be pursued into adulthood and performed at a level that suits the individual. Another possible reason is that they are seen as physically demanding, vigorous activities which enhance fitness. Certainly, the view of one OFSTED inspector is that HRE is merely about involvement in vigorous activity (Oxley, 1994). Indeed, Oxley (1994) suggests that physical educators ask themselves what levels of fitness are necessary to enable pupils to become more competent achievers in the activity areas. This hints at the view that the

rationale for HRE in PE is associated with increased fitness leading to enhanced performance, and suggests that HRE advocates have not yet succeeded in adequately communicating that HRE is much more than fitness for performance or fitness for sport. Rather, in contrast to a physical training approach, the objective should not be to force children to be fit in a limited period of time, but to provide them, including those who may never see themselves as competent achievers or who may even dislike sport, with the understanding, competence and confidence to want to be active in and out of school, both now and in the future (see Koslow, 1988).

A further and related point of interest is that approximately an eighth of schools were employing outside expertise to help deliver HRE. This seems appropriate and acceptable if it indicates that links are being made with qualified exercise teachers in the local community who are familiar with the requirements of the NC and NCPE, and aware of young people's exercise needs and desires. On the other hand, it may be a concern (a) if the individuals involved are not appropriately qualified and informed, or (b) if it implies that specialist PE teachers are not competent and/or confident delivering some practical aspects of HRE, or (c) if non-QTS teachers are considered to be as effective as PE teachers (and perhaps even less expensive). In recognition of these issues, the Exercise Association of England (the governing body for exercise and fitness established by the Sports Council in 1994) is currently attempting to work collaboratively with the PEA and the HEA to improve the quality of the foundation experience of exercise and fitness activities in schools. This will undoubtedly require consensus on pedagogical issues (such as planning intentions, teaching methods and assessment procedures) in order to ensure appropriate and effective learning within an educational context. This should help to counter the critique of some forms of HRE as a 'modern form of drill' involving 'repetitious, mindless, 'follow my leader' exercises' (Clay cited in SCAA, 1997b, p. 36), a description proposed by a small number of key PE professionals (verbal communication, SCAA Conference, London, February 1997, and Higher Education Institutes and Schools Partnership Network Meeting, Loughborough, March 1997).

7.3.7 To Test or Not to Test?

The survey results indicated that fitness testing was commonplace in nearly two-thirds of secondary schools with a tendency for it to be compulsory for younger, and optional for older, pupils. The case study findings demonstrated a range of approaches including no fitness testing at all, some informal and 'opportunistic' testing, and regular formal testing within a HRE programme. It is interesting that whilst the most commonly-employed fitness tests in schools focused on measuring cardiovascular endurance, flexibility and muscular strength/endurance, almost a fifth

of schools also included skill-related tests. This indicates a degree of conceptual confusion with respect to the relationship between skill-related components of fitness (in particular, speed and power) and health outcomes.

In addition, the review of HRPE programmes in schools (Chapter 2, Section 4, 2.5) revealed that their evaluation has tended to be more fitness than health-oriented with a focus on the systematic development of children's physical fitness monitored by performance measures on selected fitness tests. However, the appropriateness, validity and reliability of commonly used fitness tests as indicators of children's health status has been the topic of much debate in recent years (Rowland, 1995; Safrit, 1990, 1995), and a number of paradoxes relating to fitness testing have been highlighted (Seefeldt & Vogel, 1989). For example, test batteries purport to assess HRF yet do not provide any clinical measures of health status (e.g. blood pressure, blood lipids), and they emphasise safe healthy practice yet require children to perform tests which involve what could be viewed as violations of healthful behaviour (such as exercising to exhaustion). Furthermore, the applicability and appropriateness of fitness tests with children has been questioned on the grounds that there is little or no evidence to demonstrate that improvements in fitness test scores result in enhanced health status of children, and little or no evidence linking HRF parameters in childhood to the health status of adults (Seefeldt & Vogel, 1989). Freedson and Rowland (1992) suggest that until more evidence is available supporting the relationship between youth fitness, and childhood and adult health, more attention should be focused on physical activity behaviour. Indeed, student display of regular physical activity has been identified by the PE profession in America as a principal component of the definition of a physically educated person (NASPE, 1991).

A further consideration with regards to fitness testing is how test procedures might affect the social, emotional and attitudinal values of subjects (Seefeldt & Vogel, 1989). Rowland (1995) is of the opinion that fitness tests are demeaning, embarrassing, and uncomfortable to those children about which there is most concern, and only reinforce that exercise is competitive and unpleasant. He views the field testing of school children as antiethical to the goal of promoting physical activity. Indeed, a study by Hopple and Graham (1995) found that primary school children had little understanding of fitness testing and viewed it as a negative experience. PE staff in one case study school in the author's research had adopted a cautious approach as they were wary that an over-emphasis on fitness testing might represent 'aversion therapy'. However, in another school, staff views were mixed on pupils' attitudes towards fitness testing, ranging from one teacher considering it to be a positive

experience for all pupils, to another being aware that some girls even missed school to avoid it. Within the same school, teachers were also aware of pupils' sensitivities about body fat percentages which were calculated but not commented upon at a personal level or reported to parents. However, despite the above issues, Corbin, Pangrazi, & Welk (1995) consider that physical fitness testing might survive within the PE curriculum if it can be shown that it promotes what is referred to as the 'HELP' philosophy (HELP being an acronym for health, everyone, lifetime, personal) and if it complements the 'new strategy' of promoting 'health through activity' as opposed to the 'old strategy' of promoting 'fitness through training' (pp. 347-348).

Additional issues associated with the fitness testing of children relate to its educational purpose, role and value (Pate, 1994; Whitehead, Pemberton & Corbin, 1990), and its effectiveness in promoting learning and enhancing health by positively affecting physical activity behaviour. In the case study schools, the role of fitness testing varied from making pupils realise how unfit they were to a more positive approach in which it helped pupils to understand the benefits of exercise and provided a benchmark from which to improve. Undoubtedly, much of the effectiveness of fitness testing is determined by its delivery and, in this respect, there are some concerns that PEA (1988) and ACSM (1988) guidelines on fitness testing do not seem to be widely known or followed. For example, although the survey revealed that pupils' fitness levels were rarely reported to parents, this was occurring in one case study school. Reporting normative scores which tend to reflect growth, maturation and development more than effort, activity behaviour or specific fitness characteristics is clearly contrary to the recommendations which encourage positive, individual, and educational monitoring of health-related physical attributes (ACSM, 1988; PEA, 1988). Certainly, there is some concern that the administration of fitness test batteries to assess health-related outcomes could result in more prominence being given to product-related issues such as fitness and performance than to process-oriented issues such as health and participation. Prompted by concerns associated with a fitness testing 'boom' in the late 1980s, guidelines from national associations clearly stated that HRPE should not be confined to, and should go way beyond, fitness testing (ACSM, 1988; BAALPE, 1988; PEA, 1988). However, the 'popularity' (if not dominance) of fitness testing (amongst PE teachers, if not their pupils) suggests that HRE programmes have retained a fitness and performance orientation over and above one which focuses on health-related outcomes through participation in physical activity.

7.3.8 Assessment: Attitudes, Understanding, Activity?

In terms of addressing assessment, the case study findings suggested that HRE continues to grapple with the problem of measuring achievement in an area which promotes a concern for enjoyment, understanding, and participation into adulthood. In two schools, HRE assessment had not been formally addressed. However, PE staff in one of these schools considered that HRE could be assessed through pupils' attitudes towards activities, and their ability to organise a personal exercise programme. In this school, PE staff judged the success of the HRF programme on pupils' participation rates at school (curricular and extra-curricular) and on their own knowledge (albeit limited) of pupils' activity levels outside and after leaving school. This highlights the 'ambiguity of aspirations' and the problematic 'futuristic perspective' of HRF, and is consistent with the finding that the criteria for success in this area has tended to be student response during lessons, and student attitudes and behaviours to physical activity both within and beyond school (Kirk, 1986). Whilst acknowledging that teachers may never know (or be held accountable) for the future activity levels of their pupils, Laventure (1988) appealed for adequate attention to assessment and evaluation and outlined achievable targets for pupil behaviour which were adopted within the Sports Council's Active Lifestyles project in Coventry. In another case study school, assessment procedures in the form of annual fitness tests, questionnaires, and written evaluations were in place. This reflects Smith's (1993) suggestion that pupil evaluation could involve product evaluation (eg. norm-or criterion-referenced fitness tests) and/or cognitive evaluation (written or oral tests on HRF concepts). Similarly, a questionnaire was utilised as an objective method of measuring the 'health and fitness' knowledge of pupils in secondary schools in Kent (Underwood et al., 1993) and in Laws and Smalley's (1994) case study school in the South of England. However, in the author's case study school, it was suggested that assessment needed to be further addressed as the teachers did not feel that they could judge the success of the HRF course since they did not monitor effects such as activity levels. One teacher described assessment in HRF as problematic because of the difficulty of measuring changes in attitude. Williams (1986) considers that the importance of evaluation cannot be overstressed although he acknowledges that the more the school programme leans away from the cognitive, the more difficult evaluation becomes.

7.3.9 Section 2 Summary

To summarise this section on the reality of HRE in secondary schools, it is clear that PE teachers' interpretation of 'health' in the NCPE is varied and HRE appears to mean different things to different people. In practice, HRE may be represented by anything from (a) relatively unstructured comments interspersed throughout activity area-based

PE lessons, (b) sporadic bouts of fitness testing, (c) activity-focused units of, for example, aerobics and circuit-training, and (d) classroom-based 'wet weather' lessons. The diverse and wide-ranging nature of HRE is also evident from research by Penney et al. (1994c) which indicated that a fifth of secondary school PE teachers associated HRE with specific issues and/or activities, including the importance of exercise, warm ups and cool downs, fitness testing, health and hygiene, body awareness, diet, overnight camps and cross-country. Smith (1993) similarly referred to the HRF curriculum model as providing a combination of classroom lessons on various 'health' topics and practical lessons in which 'fitness' activities and their particular benefits are taught. This diversity was also evident in the BAALPE (1988) publication on HFPE, and in a much earlier description of PE's contribution to health in terms of safety understanding and habits (rules, accident prevention, first aid), mechanically sound patterns of body use (standing, lifting, carrying), the effects of exercise (endurance, strength, flexibility), physical fitness, physique and figure control, body care, links with other health behaviours, self-awareness and awareness of others, and individual responsibility for health (Wright, 1981). With respect to organisation within the PE curriculum, there is a clear preference by teachers for discrete units of HRE. Underlying this preference seems to be the view that the 'permeation' model of delivery is more difficult to implement and/or less effective than discrete units. However, it seems that much HRE practice focuses on fitness testing and, in some schools, involves activity without learning. Furthermore, research has consistently revealed that health issues are not finding systematic expression in practice within the PE activity areas in many schools (Curtner-Smith et al., 1995, 1996; Harris, 1994, 1995; Penney, 1994; Penney et al., 1994a, 1994b, 1994c). Clearly, the NCPE texts have not provided the clarification requested by McNamee (1988) and Colquhoun (1989) with respect to health issues in PE, and neither has its flexibility of approach necessarily produced effective practice. The above findings are somewhat of a concern given that the Sports Council (1993) evidently values and places much faith in the HRE component of PE when it states that:

Although the emphasis...is on the practical, it is recognised that to be 'physically educated', children need to acquire the necessary knowledge, skills and understanding to enable them to take part in and enjoy a number of different activities and maintain an active lifestyle (p. 29).

7.4 Section 3: Supporting HRE

This section discusses support for HRE in terms of liaison with key institutions and professionals, in addition to the provision of INSET and resources.

7.4.1 Limited Liaison

In their 'health-focused' PE publication (1988) BAALPE stated that primary-secondary school liaison would benefit from the inclusion of health-focused PE as a regular agenda item since it should be a continuous subject from five to sixteen years. However, the author's survey results indicated that primary-secondary liaison could be improved and the case study findings similarly revealed limited awareness of health issues in the primary curricula, suggesting that progression of HRE from KS two to three is an issue that needs addressing. Indeed, it is interesting that the review of HRPE programmes in schools (Chapter 2, Section 4, 2.5) highlighted a greater number of primary school programmes, possibly due to the holistic approach to HE and the flexibility generally afforded by the primary school curriculum. Certainly, early intervention has been encouraged from within both the PE (Biddle & Biddle, 1989; Bray, 1991; Sleap, 1990) and medical professions (Royal College of Physicians, 1991) and is supported by some evidence that physical activity patterns track into adulthood (Puhl et al., 1990; Riddoch, in press). Furthermore, much of the research on school-based interventions has focused on additional or augmented PE, in particular on daily PE within primary schools (especially in the USA, Canada, and Australia), and notably one of America's health objectives for the year 2000 is to increase the percentage of schools with daily PE classes (Caspersen, 1994). Evidently, the primary school is potentially a key player in providing the foundation knowledge, understanding, skills and attitudes associated with active lifestyles. With respect to the secondary sector, the case study findings further revealed that PE staff have limited awareness of what other PE departments in their locality are doing in terms of HRE. Indeed, it would seem that secondary schools tend to deal with curriculum issues in isolation and that occasional meetings between staff from different schools focus on logistical rather than pedagogical matters.

7.4.2 Piecemeal Professional Development?

In considering the expression of HRE in ITT, it is interesting that the NQT who was soon to commence teaching at one case study school described her HRE training in terms of physiology and fitness modules and stated that she had not experienced any HRE teaching during school practices within a three-year training period. Although there is no intention to generalise from this one account, it does nevertheless add to the concerns previously expressed regarding the physiological dominance of HRE and the limited delivery of HRE through the activity areas (which, presumably the NQT did experience during her school-based teaching practices). With respect to continuing professional development, HRE's child-centred approach and emphasis on equality and independence (Almond & Matharu, 1989; BAALPE, 1988; Harris, 1989) meant that it was inevitably associated with 'new' teaching methods and organisation,

focusing on the creation of a positive learning environment, consideration of individual needs, and the development of independently active young people. Teaching methods needed to be employed which gradually guided pupils away from dependence on the teacher towards a position in which they were adequately informed, motivated and capable of making sound judgements about exercise habits and managing their own exercise practices. These characteristics might be viewed as contrasting markedly with the requirements of skill-based teaching and, as a consequence, require sophisticated professional development involving 'deskilling' and 'reskilling' (Colquhoun, 1989). Almond (with Dowling, 1987) have commented on the demands of a health focus and referred to the range of teaching strategies required for HE initiatives (Pain, 1986), and PE teachers' tendency towards prescriptive approaches to learning (Spackman, 1986). Indeed, Almond (with Dowling, 1987) were evidently aware of the need for the HPEP to take into account the demands on teachers in making major adjustments to both their perceptions of PE and their approach to learning if they were to take on board a health focus within their programmes. However, changes in teaching methodology are potentially threatening to many teachers (Tones, 1987), and habit and tradition are extremely strong forces. Certainly, teachers' freedom, preparedness, desire and/or ability to pursue new content and methods certainly should not be assumed.

It would seem that the PE inspectorate has been an important source of influence in supporting and developing curriculum innovation. For example, in each case study school, teachers named PE inspectors and/or advisers who were either keen proponents of HRE or who had given it high profile within INSET programmes in the past. Indeed, PE staff from two case study schools considered that their particular approaches to HRE would be favourably viewed by the PE inspectorate. Another individual with the potential to influence the philosophy and nature of PE within a school is the headteacher. An interesting finding from Penney's (1994) research was that in one school it was the headteacher who was firmly committed to a health focus in PE and demanded change in the PE department in terms of a comprehensive review of curriculum aims and the introduction of HRF to the PE curriculum (p. 272).

With respect to professional development, the research findings clearly identified a need and demand for HRE INSET. Approximately a third of PE HoDs had not received any recent INSET on HRE but considered it necessary for themselves and colleagues. Indeed, over a third of them considered HRE INSET to be a priority need, over and above that relating to the specific activity areas. In keeping with the survey results of this research project, the BCPE survey of INSET (1993) identified outdoor education and dance as priority needs of secondary school PE teachers.

However, in comparison with the findings of the author's research, the BCPE survey did not include HRE as a priority INSET need. However, the question within the BCPE survey was phrased within the framework of the six activity areas and the additional item of 'safety' only, with no opportunity to add to the stated list. Thus, HRE was not explicitly addressed or prompted and it was therefore unlikely that it would feature as an identified priority INSET need. Furthermore, the response rate for this survey was only nineteen per cent representing just thirty-five secondary schools (BCPE, 1993).

The author's case study findings suggested that continuing professional development is generally viewed as problematic in that INSET topics tend to 'come and go' (as do fashions) and there are constraints on attendance, as evidenced by one PE teacher who valued HRE but had decided not to attend an INSET course because of other commitments and cost. Indeed, PE teachers from two case study schools commented on the general lack of support and finances for INSET, and one case study school was in an education authority which no longer had any specific PE advisers. This reflects concerns expressed about the decline in advisory support for teachers (Evans & Penney, 1994). In agreement with Cowley et al. (1981), INSET programmes need to focus on developing conceptualisation rather than producing teachers with certain 'pictures' or 'practices'. Within the HPEP, reflection and examination of current practice were viewed as important first steps in recognising the need for change and in preparing to explore alternative interpretations of the curriculum (Almond with Dowling, 1987). However, in a survey focusing on teachers' needs, there was no request from teachers for a rationale to identify a direction for health and fitness courses in schools (ibid, 1987). This possibly highlights the discrepancies that may exist (and from which frustrations may arise) between what teachers want (such as practical ideas and lesson plans) and what others think they need (such as an understanding of the philosophy and rationale underpinning the curriculum). It would seem that the closure of national projects has created a gap in terms of support for the delivery of HRE in the school curriculum. In this respect, it is difficult to see how HRE survives, let alone thrives and develops, without well planned, accessible and purposeful initial and continuing professional development programmes.

The review of HRPE programmes in schools (Chapter 2, Section 4, 2.5) highlighted the influence of the teacher on curricular outcomes (McKenzie et al., 1993, 1996; Worsley & Coonan, 1984). Some programmes such as 'Know Your Body' (Walter et al., 1988), 'Staying Well' (Abbott & Farrell, 1989) and 'Florida's Fit to Achieve' (Sander et al., 1993) have addressed this issue by including detailed teacher resources, whilst both the SPARK and CATCH projects (McKenzie et al., 1993, 1996) have

deemed INSET to be a key feature of the intervention. In addition to support for primary school teachers, the author's research would suggest that there is also a need for support for specialist secondary school teachers implementing HRE. It is clear that there is some confusion and lack of consensus amongst specialist PE teachers in England about the concept of HRE, and it would appear that support is required in assisting teachers in clarifying what HRE represents and how it might be effectively delivered. Owen (1994) has called for well designed induction and training programmes to enhance teacher confidence and skills to enable the development of interesting and stimulating programmes which include skill development, conditioning, and informational components. While Tinning (1987) believes the success of some daily PE programmes to have been predominantly due to teacher competence and good quality support, he also reports that many daily PE lessons are characterised by uninspired teaching and suggests that the daily PE movement has done little to alter teacher practice or teacher attitudes. Indeed, Tinning and Kirk (1991) comment that what passes as daily PE in some cases is worse than no PE, with pupils neither becoming fit nor learning to value physical activity. They have further commented that much of the research on HRPE programmes has not been informed by the literature on innovation which suggests that genuine and sustained change requires investment in professional development. The review of HRPE programmes in schools confirms that professional development has rarely been a central component of research interventions, one possible reason for this being the complexity, cost and time involved.

7.4.3 Restricted Resourcing

The fact that health-related resources from both Britain and America were being used in about a quarter of secondary schools suggests that such resources had the potential to, and probably were, to some extent, influencing the expression of HRE in those particular schools. However, this figure seems particularly low with respect to the HPEP newsletters which were distributed free to all state secondary schools in England, although problems relating to distribution via the LEA PE inspectorate (and even within individual schools) had been made known to the HPEP. The somewhat limited range and use of texts (especially IT resources) to support the delivery of HRE could be due to (a) a lack of appropriate resources designed to fulfil NCPE requirements, (b) limited awareness and/or availability of resources, and/or (c) insufficient funds or desire to purchase HRE materials. The fact that 'home-made' pupil worksheets were one of the more commonly used HRE resources, and that staff in two case study schools had compiled their own pupil booklets from literature in the area, would suggest the need to contextualise what is available into workable teacher and pupil resources. Although a proportion of PE teachers were clearly prepared to

do this, it inevitably requires additional effort and work which may serve as a constraint for some teachers, and it also points to another layer in the 'implementation' process comprising the selection, interpretation and use of accessible resources. The reliance in one case study school on commercially produced resources highlights the need for teachers to be able to make sound judgements about the appropriateness of such resources within an educational context. Clearly, teachers are likely to be targeted, and may be tempted by the range of resources from the adult-oriented 'fitness' industry which is keen to extend its market. However, many commercially produced resources have been designed for use with adults and thus may not be wholly appropriate for young people (examples being adult 'training zone' posters and the Multi-Stage Fitness test). The selection of a 'fitness-oriented' programme within one case study school exemplifies a tendency towards a focus on fitness and measurement, and highlights the point that resources can act as a stimulus and may even dictate the direction which a programme takes simply because they are available and appear to have an authority. The fact that over a third of schools were making use of skinfold calipers and weighing scales certainly begs the question as to how sensibly and sensitively the subject of weight management was being delivered.

Between the time of the survey and the case studies, a number of additional health-related resources were produced with a particular focus on increasing children's activity levels. Examples of such include (a) the 'Active School' which encourages schools to formulate and implement an action plan for increasing pupils' activity levels (Almond & McGeorge, 1995), (b) a revised version of the earlier 'Exercise Challenge' which is a teaching resource designed to help deliver the HRE requirements of the NC and to reward pupils for positive health behaviour (McGeorge, 1993), and (c) the 'Fitness Challenge' which is an incentive scheme for younger children aimed at encouraging participation in any form of physical activity (Hill, 1993; University of Hull, 1994a, 1994b). In addition, numerous commercially-sponsored resources have been produced during the past five years such as Mars' 'Focus on Fitness' (1992), Persil's 'Funfit' (1996), the Royal Navy's (1996) 'Action Fitness Health Related Activity Pack', and Puma's 'ProActive' (1996). None of the resources published between 1992-95 were mentioned by any of the PE teachers in the case study schools. Whilst these resources may assist teachers in their HRE work, it is evident that recent NCPE-related resources such as those published by the PEA (1995a, 1995b) have focused almost entirely on the six activity areas with HRE effectively marginalised. For example, the publications lack guidance to help teachers interpret and deliver HRE, yet this assistance is provided for each of the activity areas. There is minimal provision to help teachers to understand and teach the HRE requirements either through integrated, discrete or combined modes of

delivery. A similar situation arose with respect to HE in the curriculum, which led Donaghue (1991) to express the view that to avoid HE being 'lost', supporting documents and INSET would be necessary to show teachers in other curriculum areas how they might incorporate HE concerns and teaching methods based on the active involvement of pupils (p. 88). Clearly, this still remains a need for PE.

7.4.4 Section 3 Summary

It is evident from this section relating to the support structure for HRE, that progression of HRE between the primary and secondary sector is an issue that needs addressing. In addition, PE teachers have limited awareness of the PE curricula of other schools, rarely meet to discuss pedagogical issues, and often plan and deliver the curriculum in relative isolation. Further, there is a tendency for HRE to have been marginalised in both initial and continuing professional development. HRE was identified by PE teachers as a priority INSET need which had not been met. Clearly, HRE has little chance of developing without initial and continuing professional development programmes, especially when one considers that 'conservative' PE teachers are unlikely to willingly take on board HRE with its differing demands in terms of content and teaching approaches. In considering additional sources of influence on curriculum innovations such as HRE, it would seem that some PE inspectors have played a key role in promoting and facilitating such developments. However, this is less likely to be so now and in the future due to the decline in advisory support and the shift towards school-based ITT (Evans & Penney, 1994). Furthermore, the closure of the national health and PE projects has meant that there is no lead body providing support for the delivery of HRE. Although health-related resources are available and are being used in some secondary schools, teachers need to be able to make sound judgements about their use within an educational context. There is a tendency towards a focus on fitness and training, partly prompted by resources available within the commercial adult-oriented 'fitness' industry. Furthermore, although some recent resources may assist in supporting HRE, many NCPE-related resources have focused almost entirely on the activity areas with HRE seemingly marginalised. Supporting documents and INSET are needed to show PE teachers how they might incorporate health issues and adopt teaching methods based on the active involvement of pupils. Although genuine and sustained innovation undoubtedly requires an investment in professional development, to date this has rarely been a central feature of research interventions in HRE.

7.5 Section 4: Extending the Curriculum - Activating the Adolescents?

This section discusses HRE in terms of the extended curriculum and its potential impact on the promotion of active lifestyles.

7.5.1 Extra-Curricular Provision: More for the More Able?

On a positive note, the research findings suggest that PE teachers contribute on a regular basis to many hours of extra-curricular provision, not only in their own schools but also in association with local clubs and regional activities. PE HoDs alone invest on average about seven hours each week in supporting the extended curriculum. These results are very similar to those of Penney (1994) who found that virtually all secondary schools in one LEA in the South of England offered extra-curricular activities, and that PE HoDs devoted on average over seven and a half hours per week to this provision. The picture is much the same in Wales (Sports Council for Wales, 1995). Such findings permit a strong challenge to claims by both politicians and the media that extra-curricular PE in state schools in England and Wales is an increasingly rare feature of PE provision (Penney & Harris, 1997). Perhaps not surprisingly, lack of recognition (by senior colleagues, the media and the public) for teachers' contribution to extra-curricular provision was a major source of dissatisfaction amongst PE staff in the case study schools. There was also a degree of scepticism over the government sport initiatives (DNH, 1995) with some PE teachers suggesting that only minimal change was possible without a major financial investment in resources, facilities and coaches. Others, notably female PE teachers, expressed their discontent with the government focus on competition and excellence which they considered to be unnecessarily narrow and elitist.

Although the research findings provide firm evidence that extra-curricular activities are being provided, what is less clear is whether the level of provision represents a decline from previous times. Comments made by PE staff in two case study schools certainly indicated that factors beyond their control (eg. changes in the pastoral system) had resulted in some reduction in school-based sporting events such as house-focused activities and sports days. Additional comments suggested that the involvement of teachers, and in particular of non-PE teachers, may have reduced as a consequence of the industrial action in the 1980s, and the additional demands of the NC. The research findings also identified extra-curricular provision as having a particular focus and consequently as offering opportunities and experiences to only a minority of pupils (Penney & Harris, 1997). Consistent with Penney and Evans' (1994) survey findings, the vast majority of the extra-curricular provision comprised competitive games-oriented activities. Non-games activities accessible to all abilities (competitive or otherwise) represented a much smaller proportion of the extra-curricular provision. Furthermore, although each of the case study schools offered recreational activities accessible to all pupils, the majority of the provision focused on school teams, and PE staff were openly aware of (although not especially content

with) a bias towards provision for more able team players. Indeed, PE staff in each of the schools described the reputation of the department in the local area on the basis of extra-curricular (as opposed to curricular) achievements (and, in particular, those of boys). PE staff acknowledged the dilemma of offering opportunities to all pupils within the constraints of limited staff numbers and time, and given senior staff's expectations for the school to be involved in the pursuit of trophies.

On this latter issue, even in the early 1980s, the desire was expressed for the range and rationale of school PE club activities to be such as to encourage maximum participation (Wright, 1981, p. 167). Thirteen years later, however, Wortley (1994) remains critical of 'trophy-hunting' PE departments and states that:

- * Radical changes are needed to increase the number of students leaving secondary education with positive attitudes to exercise. Difficult decisions have to be taken by staff in some schools. There will no longer be the opportunity for kudos to be gained from the activities of a small group of elite athletes, if the exercising climate of the whole community is to be improved (p. 112).

Wortley (1994) goes further in proposing conditions and practices necessary to successfully develop healthy active lifestyles including pupil involvement in planning, and recognition and rewarding of participation as a valued activity in the whole school. She believes that a PE curriculum which takes account of the aspirations, needs and abilities of all students has a realistic chance of success, and that PE teachers must endeavour to improve the quality of the exercise experience and make exercising more attractive and intrinsically rewarding to more students (ibid, 1994).

7.5.2 Activity Promotion: More Pupils More Active More Often?

Although two thirds of secondary schools claimed to be offering a wide range of physical activities to all pupils, many young people were evidently not being provided with such opportunities, and more than half of schools had no written policies on the promotion of physical activity. This is somewhat disappointing given the Sports Council's (1993) encouragement for schools to establish a 'whole school' approach towards health, exercise and the promotion of active lifestyles. Indeed, much faith is being placed in school PE to educate children about exercise and to activate young people. This is evidenced by the government white paper which outlines strategies for improving the health of the nation. It points out how the NCPE 'stresses the importance of physical activity and requires pupils to show that they recognise its

importance and the effect that activity - or the lack of it - can have on the body' (DoH, 1992, p. 62). In addition, the Allied Dunbar National Fitness Survey (Sports Council & HEA, 1992b) stated that 'active living begins in childhood' and that 'the foundation skills for sport, recreation and active living and understanding the benefits of physical activity need to be learned at an early age' (p. 11). Implications for schools and other institutions were clearly highlighted:

In childhood, the school curriculum in PE and other subjects should cover health-related exercise and sport so that children acquire skills, interests and hobbies that will last a lifetime. This requires actions not only by the Department for Education and Science but teacher training institutions, local education authorities, head teachers and heads of physical education, governors and PTAs as well as parents. Better links between schools, clubs and other leisure facilities would improve the transformation from school activities to use of facilities in the community once people leave school (Sports Council & HEA, 1992a, p. 138).

The case study findings would suggest that PE teachers have anecdotal evidence of some deterioration in children's fitness, which they consider to be due to the trend towards sedentary living, as well as to non-specialist PE teaching in primary schools and reduced PE time in secondary schools. They were also of the opinion that boys are more active than girls partly because of greater activity opportunities for the former. Indeed, researchers have reported that children are not active enough to benefit their health, that boys are more active than girls, and that activity levels decrease as children get older (see Armstrong & Welsman, 1997). Whilst acknowledging the methodological problems in analysing young people's habitual physical activity, and accepting that further research is necessary to confirm the concerns about activity levels and to establish more precisely the minimal and optimal levels of exercise associated with specific health gains (Riddoch & Boreham, 1995; Riddoch, in press), the trends have been remarkably consistent and highlight a number of implications for the PE profession (Cale, 1996a; Harris & Cale, 1997b). For example, issues are raised with respect to exploring effective ways of helping pupils to appreciate and understand why being active is relevant for them, and providing increased opportunities for participating in appealing forms of physical activity. However, in this study, PE's role in promoting physical activity, which was seen in particular in terms of emphasising the benefits of exercise, offering appealing PE curricula, and presenting opportunities for all children to be active, was viewed by PE teachers as severely constrained by external societal influences.

The response to concerns over low activity levels and the establishment of physical activity guidelines for young people (Corbin et al., 1994; Sallis & Patrick, 1994a, 1994b) has culminated in a plethora of activity promotion initiatives during the 1990s (Almond & McGeorge, 1995; Hill, 1993; McGeorge, 1993; University of Hull, 1994a, 1994b). A number of commercial companies (such as FitKid and FitClub) have also emerged which provide training for exercise teachers who wish to deliver activity classes to children (predominantly of primary school age) in a range of venues such as schools, leisure and sport centres, and fitness and health clubs. Recent accredited training courses have been established in the area of children's exercise in the form of the Royal Society of Arts (RSA) (1996) course for teaching health-related movement and fitness for the under fives, and Central YMCA's (1993) FirstLevel course in HRE aimed at KS four and beyond. National associations such as the Keep Fit Association (KFA) have also recently launched (or are about to launch) their own training programmes (Conquest, 1997). Furthermore, the NJSP has added a module entitled 'Fit for Tops' to its YST series of 'Top' programmes for primary school children. Local initiatives to increase the activity and/or fitness levels of children have generally taken the form of HRF lesson plans for use in primary schools (St Edmundsbury Borough Council, 1994; Westmacott, 1995).

It is important to consider the above developments and initiatives in the context of a broader picture of activity promotion. In 1993, the role of the school in promoting physical activity was emphasised by the Sports Council who stated that:

By encouraging the development of positive attitudes to health, activity and fitness and the constructive use of active leisure, schools can give young people the skills, knowledge and experiences to develop an active lifestyle (p. 18).

The Sports Council (1993) further encouraged schools to 'establish a PE programme which is sensitive to the post-school recreational needs of young people and local opportunities to become involved' (p. 19) and commented that:

Teachers have a responsibility to be 'outward looking' in approach and ensure that the curriculum is relevant to children's lives outside the school as potential sports participants. Key roles here are to introduce children to a broad range of physical activities within the curriculum, to the leisure opportunities available to them outside the school and to help them understand the benefits of a healthy and active lifestyle. These are given a high profile

within the national curriculum. Some teachers will need to adapt their teaching strategies to ensure that this takes place (p. 39).

Also in 1993, as part of the 'Health of the Nation' initiative (DoH, 1992), the government formulated the Physical Activity Task Force (PATF) whose national strategy statement had as its main objective the promotion of moderate physical activity for the third of the adult population who could be described as sedentary (DoH, 1996). The co-ordinating role of the PATF (which was disbanded in 1996) is being carried forward by the HEA whose promotional message, reflected in their 'Active for Life' campaign, is for adults to incorporate half an hour of moderate physical activity into their daily routine ('5 x 30 minutes most days of the week'). It is interesting to note that, with specific reference to young people, the national strategy statement declared that:

Children are particularly important and both active living and sport in schools will benefit them....The Health of the Young Nation initiative should incorporate work to assist young people, who are physically active, to maintain their level of activity during and beyond the transition to adulthood. This may involve changing the types of physical activity they are involved in as their personal circumstances change (DoH, 1996).

The strategy document details ways in which government departments and agencies are involved in the promotion of physical activity. Examples include sport and recreation policies such as encouraging the use of school facilities out of hours, improving sporting opportunities through action prompted by government publications (DNH, 1995, 1996) and the revision of the NCPE (DfE & WO, 1995) which 'strengthens the place of games within PE and places a general requirement on schools to promote physical activity and healthy lifestyles for all pupils' (DoH, 1996). Progress is to be assessed by means of survey data which, to date, have not incorporated information about children, but will in the future report on physical activity levels of young people in England, making use of indicators such as changes in the numbers of journeys to and from school undertaken by foot or by bicycle.

Although the national strategy document (DoH, 1996) has called for a prioritising of future research on children, it remains pertinent to consider points raised by research already undertaken. This research covers issues such as the importance of considering the salient elements within physical activity that attract young people's continued involvement since long-term goals associated with cardiovascular health do not seem to be sufficiently potent as an impetus for participation (Hendry et al.,

1995). There is also a need for increased awareness of 'competing' leisure and social activities for young people, and the effects of the mass media in projecting 'desirable' social stereotypes, the latter of which may prevent physical activity from being perceived as a necessary and valuable part of adolescent life (ibid, 1995).

It would seem that school PE has a key role to play in promoting health benefits through involvement in physical activity, in providing appropriate exercise guidance, and in empowering young people to make informed activity choices. Indeed, Fox (1992) believes that preparation for lifetime exercise represents the singular greatest contribution that PE can make to the quality of life of people. Pate and Hohn (1994) in the United States also believe that PE should focus its attention first and foremost on the promotion of lifelong physical activity. Certainly, the PE profession could capitalise more on the influence that it potentially has in the enhancement of young people's health and the promotion of active lifestyles. Marland (1997) considers that the attractiveness and efficiency of the PE programme needs great care, and he refers to PE's high truancy rate (thirty-four per cent in comparison with sixteen per cent for geography, English and technology) and suggests that it may partly be caused by arrangements for changing and showers (p. 16). Thus, despite much political rhetoric and emphasis on PE's role in activity promotion, it seems that this is not necessarily filtering down into schools and affecting practice. It would appear that the status of school PE both within and outside education circles requires a major up-lift as evidenced by the trend towards a reduction in the support and resourcing of ITT and INSET of primary and secondary teachers of PE (Evans et al., 1996b; Evans & Penney, 1994), the reduction in school PE time over the past few decades (Fairclough & Stratton, 1997; Harris, 1994c), and the relatively recent threat of 'dropping' compulsory PE for fourteen to sixteen year olds (Dearing, 1993). The seemingly low status of school PE certainly appears inconsistent with a national campaign promoting the health benefits of physical activity with a particular focus on the activity needs and desires of young people.

7.5.3 Section 4 Summary

This section on the extended curriculum and its potential impact on the promotion of active lifestyles, reveals that, contrary to media reports, PE teachers are making a major contribution to extra-curricular provision. This is despite the fact that it is voluntary, unpaid and, in their view, largely unrecognised. However, the introduction of the NC may have adversely affected the extended curriculum as a consequence of additional work demands. Furthermore, a closer look at the extra-curricular provision suggests that it tends to have a particular focus (predominantly competitive games) and to be targeted at a minority of pupils (more able team players, particularly boys).

PE teachers acknowledged the difficulty or even impossibility of meeting the needs of all pupils given constraints such as limited staff numbers and time, and expectations to produce successful school teams. However, they did not seem willing or prepared to take 'difficult decisions' or make 'radical changes' to their current practices (Wortley, 1994, p. 112). Recent government sport initiatives were generally considered to be under-resourced and possibly even mis-directed. Furthermore, despite much faith being placed in school PE to activate young people, the majority of schools had no specific policy for the promotion of physical activity, and PE's role in this area was viewed as severely constrained by external societal influences such as sedentary living habits. PE teachers seemed to concur with research findings that children are not active enough to benefit their health, that boys are more active than girls, and that activity levels decrease as children get older. However, the impression given was that they were doing as much as they could in this area and that the problems and solutions generally lay outside the PE profession. Thus, whilst school PE clearly has a key role to play in promoting 'active living', it could capitalise more on the influence that it potentially has in this area, especially if it is to contribute to the national campaign's focus on identifying and addressing the physical activity needs and desires of young people.

7.6 Section 5: Gendered HRE

This section discusses gender issues arising from the survey and case study findings both of which indicated some differences between female and male PE HoDs in their health-related views, approaches and practices, and variations in HRE programmes for girls and boys.

7.6.1 PE for Girls and for Boys

Prior to discussing gender issues specifically associated with HRE, it is necessary to acknowledge the literature which clearly establishes a theoretical underpinning of feminist theories and gender ideology (Deem, 1986; Flintoff, 1990; Hargreaves, 1986; Leaman, 1984; Oakley, 1972; Scraton, 1986, 1990, 1993; Talbot, 1985, 1990, 1993; Williams, 1989, 1993). It is also pertinent to summarise this study's research findings with respect to such issues within PE generally. The research indicated that the majority of PE HoDs in mixed sex schools were male, and that usually female staff were teaching girls, and male staff teaching boys. In addition, the content and delivery of the PE programme for girls and that for boys within the same school often varied, the main differences being that: (a) boys tended to be provided access to a wider and different range of games than girls, (b) different styles of gymnastics were delivered to girls and boys, and (c) dance, if offered at all, was provided only, or predominantly for, girls. Furthermore, female PE HoDs generally favoured the

inclusion of dance while male PE HoDs favoured outdoor education within the NCPE. Examination courses in PE were on offer in two case study schools and, in each, the candidates were predominantly boys. PE staff in each case study school claimed to have no specific policy on gender groupings yet PE was usually delivered in single sex groups, particularly at KS three. Single sex teaching was the preferred option for most PE staff, and mixed sex teaching only occurred at KS three when timetabling and staffing issues 'forced' it to happen. On the subject of equal opportunities, PE teachers made reference to the lack of provision of football (and, in one school, of badminton) for girls, but not to the absence of netball for boys, or to the limited aesthetic component of the curriculum for both genders, but in particular for boys. Female PE staff were aware of gender disparities in the PE provision (as these were often voiced by female pupils) and, in two case study schools, referred to possible future change, which had been resisted in the past due to tradition and teachers' reluctance to deliver 'unfamiliar' activities. This necessarily concise summary of gender issues in PE tends to support Scraton's (1986) notion that (a) separate and different PE programmes remain a central concept in schools, and (b) her assertion of the institutionalisation within PE policies and practices of assumptions that girls are physically less capable than boys and exhibit specific female characteristics. However, it has been suggested that a health-related approach to PE is more likely to provide an equitable environment (Carrington and Leaman, 1986; McKenzie et al., 1996; Williams, 1989). For example, it has been found that, within a HBPE programme, girls and less skilful students felt more integrated into the lessons (Velert & Devis, 1995). This issue is considered next.

7.6.2 Female and Male Versions of HRE

Whilst acknowledging that significant differences in the survey findings remain to be rigorously pursued through follow-up research, some interesting trends were identified with respect to female and male 'versions' of HRE. For example, in terms of policy issues, female PE HoDs considered the KS four HRE statement addressing personal exercise programmes to be somewhat easier to interpret and assess than did male PE HoDs. In addition, with respect to the body of knowledge associated with HRE, more female PE HoDs included relaxation and stress management, while more male PE HoDs included strength work and fitness testing. The case study research similarly found that female PE teachers in two schools acknowledged that there was minimal attention to strength work in their HRE units, and they also expressed some concern about 'formal' testing adversely affecting some pupils' attitudes towards PE. Male PE HoDs not only included more fitness testing, but they were also more inclined to report fitness levels to parents. Some interesting differences were also noted in the emphasis placed upon specific components of fitness, with more females

incorporating flexibility tests and more males including upper body strength tests. It was also found that more males than females were utilising monitoring instruments such as flexibility testers, weighing scales, 'sit and reach' boxes, heart rate monitors, skinfold calipers, and dynamometers. Caldecott's (1992) finding that most male, yet only half of female, PE teachers favoured the inclusion of theory was only partly reflected in this research in which female staff in one case study school had abandoned HRE units because they considered that the pupils would benefit more from 'fully practical' PE lessons.

Gender differences were also noted in the practical content of HRE. More male than female PE HoDs included cross-country running, circuit-training, weight-training (both fixed and free weights) and keep fit in the compulsory PE curriculum, yet more female PE HoDs included skipping. With respect to optional activities within the PE programme, more females offered aerobics and skipping, and more males offered cross-country running. Similarly, the case study findings revealed gender differences in the activities provided for, or selected by, pupils. For example, in one school, girls and boys followed a different type of HRF course at KS four, the girls' course covering a range of aerobic-type activities and the boys' course focusing on sporting activities. The survey also revealed differences in the extra-curricular provision with more female PE HoDs including aerobics and step aerobics, and more male PE HoDs including weight training (free and fixed weights). Indeed, in each case study school, activities such as aerobics and step aerobics were either provided solely for, or were selected primarily by, girls. Gender differences in pupils' choices of physical activities within an 'exercise and health' curriculum in a Spanish secondary school were similarly detected by Devis and Peiro (1992) who noted boys' preference for sports and girls' for individual activities. In their view, such gender-related differences support the notion of a male competitive discourse in PE and sport (ibid, 1992). With this in mind, it is interesting to note Wortley's (1994) view that a condition considered necessary to the successful development of healthy active lifestyles is the elimination of gender bias, and the provision of a wide variety of activities, particularly those more likely to be carried forward successfully to adult life.

When considering differences in the provision of HRE between mixed and single sex schools, one has to be aware of possible confounding factors such as school type and size. In addition, the survey data analysis did not pursue specific differences in the findings between all girls' and all boys' schools. However, of particular interest was the finding that, in a large majority of mixed sex schools, HRE was delivered in mixed sex discrete units for the younger years, and over half of schools had mixed

sex units for the older years. It was also found that, in some schools, classes in the same year were taught in mixed sex, while others were taught in single sex, groups for HRE. More male than female PE HoDs organised HRE in mixed sex groups for most year groups. This finding is consistent with that by Caldecott (1992) who investigated the HRF practices of PE teachers and reported that male teachers were in favour of mixing boys with girls for HRF teaching, whereas female teachers were of a more divided opinion. In two of the author's case study schools, discrete HRF units were delivered to single sex groups, the justification being associated with logistical issues such as HRF being timetabled at the same time as single-sex games. In one school, however, two PE teachers expressed a preference for mixed sex groups for HRF and one felt that this might be introduced with younger pupils, although single sex groups were viewed as more appropriate for older pupils who were undergoing pubertal changes. Nevertheless, although some PE teachers in each school considered that HRE could be delivered in mixed sex groups, they saw little reason to change their current practice unless compelled to do so by timetabling or staffing constraints. The NQT was similarly accepting of separate and different provision of HRE for girls and boys.

The survey and case study findings also point to differences in the nature, amount and timing of the extra-curricular provision offered by female and male PE HoDs for girls and boys. Males spent on average over an hour extra per week than females on extra-curricular activities, and more males than females offered extra-curricular activities at weekends and before school. This may be due to the relatively greater family and domestic responsibilities of females in comparison with males resulting in a situation in which male teachers have fewer restrictions on their time. These points were clearly communicated by PE teachers in the case study schools and have been identified by other researchers (Scruton, 1986). Extra-curricular assistance was generally received from male non-PE teachers, and PE staff were keen to have much more assistance, especially from female non-PE teachers.

It would seem that extra-curricular provision is greater for boys than girls with more teams for the former, and that there is a tendency for girls' activities to take place mostly at lunch times, in contrast to those for boys which also occur after-school and at weekends. Thus, there is generally less on offer for girls and it is restricted to particular times of the day. This may reflect a number of issues such as the relatively reduced freedom of girls in comparison with boys to be independently mobile (Hillman, Adams, & Whitelegg, 1990), the problems of reconciling sporting behaviour with prevailing conceptions of femininity (Carrington & Leaman, 1986; Mitchell, 1997), and/or the relatively reduced appeal of competitive team games for

girls (Dickenson & Sparkes, 1988; Goudas & Biddle, 1993; Hendry et al., 1995). Indeed, staff in two case study schools commented on the lack of interest of some girls in traditional team games (both curricular and extra-curricular) and the growing interest of girls in more individual activities such as fitness and gym work. Similar points have been made by Hendry et al. (1995) who, in a summary of research studies, stated that organised physical activities are not particularly attractive to certain adolescent groups, especially females, who tend to prefer casual fun-oriented physical activities in which the focus is more on sociability, enjoyment and competence rather than competition. This may partly account for more female than male PE HoDs including inter-school non-competitive activities within the extra-curricular programme. It may also account for the situation described in one case study school in which a different philosophical approach to extra-curricular provision was apparent between female and male teachers, with the former claiming to focus more on participation for fun and enjoyment, and the latter reportedly concentrating more on team provision.

7.6.3 Section 5 Summary

In summarising this section on gender issues in HRE, the research findings indicate that, rather than HRE providing a more equitable environment as previous researchers have suggested, there is a tendency for stereotypical views to be reflected, expressed and reinforced by HRE practices. Although one has to be wary of generalisations from limited research and follow-up study is clearly required, 'female' and 'male' versions of HRE, considered appropriate 'for girls' and 'for boys' respectively, do appear to have emerged as a feature of many PE curricula. A 'female' version of HRE tends to be more holistic in its health-orientation (eg. incorporating the areas of relaxation and stress management), more lifetime-oriented and individualised in its approach (eg. including activities such as aerobics, step aerobics and skipping), and more likely to be organised in single sex groups. A 'male' version of HRE tends to be more scientifically and technically-oriented (eg. incorporating strength work and fitness testing using a range of monitoring equipment), with more of a fitness and training type approach (eg. including activities such as cross-country running and keep-fit), and more likely to be organised in mixed sex groups. Perhaps little has changed since the early 1980s when gender-differentiated curricula were proposed in the form of keep-fit activities to music for girls emphasising weight control and body figure, and fitness activities (eg. cross-country running and circuits) for boys with a focus on the development of body physique (Wright, 1981, pp. 167-168). Indeed, the issue of gender-differentiated curricula for HRE was clearly highlighted by one male PE HoD who explained (within the 'additional comments' section of the survey questionnaire) that he was pleased to receive a follow-up questionnaire as this

permitted both himself and the head of girls' PE to separately complete questionnaires. He considered this to be appropriate as: 'with regard to some areas such as HRF, we have different approaches to some of our work. This may not be politically correct but it has been discussed at length, without agreement, and the situation remains'. Clearly, the cause, extent and impact of such differences are worthy of further exploration.

7.7 Section 6: Implementation Influences and Issues

This section reviews factors influencing and affecting the implementation of HRE in the NC and NCPE including characteristics of the PE HoD such as their experience in the position, and school characteristics such as type, size and geographical location. In addition, there is some discussion of contextual constraints, the ideology of individualism, and the notion that health may possibly be threatening or hijacking PE.

7.7.1 Does Teaching Experience Matter?

The survey results revealed some differences in the views, approaches and practices relating to HRE between PE HoDs with less than five years experience in the position and those with more experience. There was some indication of a difference in opinion as to which age group and in what form HRE should be delivered. For example, more of the less experienced PE HoDs considered the KS three HRE requirements to be important enough to be compulsory and were offering optional HRE units at KS four, while the more experienced PE HoDs had more compulsory HRE units at KS four. These findings may reflect the view that more experienced PE HoDs consider HRE as an area which is more appropriately delivered to older rather than younger pupils. Other notable differences were that more experienced PE HoDs generally reported better liaison with the individual responsible for HE and were more likely to include areas such as weight management, relaxation and stress management. Liaison issues may be a consequence of more experienced HoDs knowing other staff better and/or being more settled in their role and have more time and expertise to make such links. Probably as a consequence of teaching about weight management, more experienced PE HoDs were making more use of resources such as weighing scales and skinfold calipers, in addition to commercially produced posters, dynamometers and pedometers. In contrast, less experienced PE HoDs were making more use of 'home-made' resources such as worksheets and 'sit and reach' boxes. With respect to the extended curriculum, it was found that more experienced PE HoDs tended to offer more team training sessions for selected players. All of the above differences may be a consequence of the less experienced PE HoDs being more recently trained than the more experienced PE HoDs. Whilst acknowledging that teaching

experience does not necessarily equate with teacher expertise, the latter being difficult to define (see Piéron & Carreiro da Costa, 1996), the findings suggest that differences in HRE provision between PE HoDs of varying experience and having undertaken ITT at different times is an area worthy of further exploration.

7.7.2 State v Independent: Who Wins?

The survey results revealed some differences in the views, approaches and practices relating to HRE between the state and independent sector. The most obvious difference was that the former seemingly had a more committed approach. In state schools HRE was described as more structured and three-quarters of schools had written schemes of work for HRE compared with less than half of independent schools. This difference is presumably as a consequence of there being no statutory obligation for independent schools to pursue NC requirements. In addition, differences were found in the organisational approach with almost twice as many state as independent schools having compulsory HRE units in PE at KS three, and more HRE being delivered through other subject areas in independent schools. A further difference was that more independent than state schools described their HRE units as activity-based and were more likely to be utilising outside expertise to assist in its delivery. This suggests that the independent sector tends towards a practically-oriented approach to fitness activities, possibly with minimal cognitive input. Furthermore, teaching HRE through gymnastics was described as more structured in state schools yet through dance and swimming was described as more structured in independent schools. The latter possibly reflects differing provision of, and approaches to these activity areas within the state and independent sectors.

With respect to terminology, health-related terms were more frequently used in state schools whilst the independent sector was more inclined to adopt the term 'fitness'. The survey results suggested that few PE HoDs in independent schools viewed HRE as having a specific knowledge base, this possibly being due to limited exposure to appropriate teaching resources and INSET. For example, more state than independent schools included stamina, suppleness, strength, fitness testing, and exercise programming. However, compulsory fitness testing took place more in state schools for year nine yet more in independent schools for older pupils (years ten to thirteen). In terms of practical content, more state than independent schools included compulsory cross-country running and aerobics, and offered aerobics, circuit-training and weight-training as options in the PE curriculum. Indeed, in independent schools, activities such as skipping, keep fit, jogging, aerobics and circuit-training were more likely to be offered within the extended curriculum. The only exception was cross-

country running which was offered more in the extended PE programme in state than independent schools. Water exercise was included more in the curricular and extra-curricular programmes in independent schools possibly due to independent schools having greater access to on-site swimming facilities.

More PE HoDs in independent than state schools considered HRE to be a priority INSET need, probably because PE teachers in the independent sector had no formal access to local authority INSET. Furthermore, the HPEP newsletters were distributed primarily via the LEA inspectorate which accounts for why almost twice as many PE HoDs in state schools were aware of the HPEP in comparison with those in independent schools. More PE HoDs in state schools were using resources produced and/or promoted by the HPEP and were using a broad range of additional teaching resources. Finally, the timing and content of the extra-curricular provision varied somewhat between the two sectors in that more independent than state schools offered activities at weekends and before school, and incorporated non-games competitions, exercise activities open to all abilities, and team training sessions for selected players. However, more state schools offered inter-school league or knockout games competitions. These differences in provision between the state and independent sectors probably reflect some variation in the value placed on extra-curricular sport and the differing context in which it occurs. These issues would need to be explored through further research.

7.7.3 School Size: Is Bigger Better?

The survey results revealed some differences in the views, approaches and practices relating to HRE between schools of different sizes. More PE HoDs in large to medium-sized schools considered the EKS three HRE statement to be important enough to be compulsory and were of the opinion that HRE needed to be delivered through discrete units. However, more PE HoDs in small schools considered the secondary HRE statements to be easy to assess. In larger-sized schools, the teaching of HRE was described as more structured and there were more written schemes of work for HRE. Furthermore, there were more HRE units in larger-sized schools yet more HRE permeated through the activity areas in small schools. The apparently greater commitment to HRE and the preference for discrete units in larger schools may be due to the influence of individuals within a large department with particular expertise, enthusiasm and responsibility for this area, and/or the possibility that 'permeation' is viewed as difficult to implement with many teachers in a large department.

In terms of theory, more PE HoDs in medium to large-sized schools included stamina, strength, suppleness, fitness testing, and exercise programming. With respect to practical content, more large to medium-sized schools included compulsory weight training, optional aerobics, weight training, circuit training, cross-country running and step aerobics, and offered cross-country running, weight training and aerobics within the extended curriculum. There was also more compulsory fitness testing and a broader range of tests in large to medium-sized schools. Thus, it seems that school size can affect curricular design in that the theoretical and practical content of HRE was more wide-ranging in larger schools. Again, this may be due to the presence of individuals with particular expertise in and responsibility for the area (as was the situation in one case study school). In addition, logistically it may be easier to offer a wide range of practical activities with a larger number of specialist staff.

HRE was considered to be more of a priority INSET need in small schools. PE HoDs in large to medium-sized schools reported to be using many more HRE texts and resources and were more aware of the HPEP. In terms of the extended curriculum, PE HoDs in medium to large-sized schools spent more time and offered more extra-curricular activities at lunch times and weekends than those in small schools. More PE HoDs in larger schools also considered that they offered a wide range of physical activities which were accessible to all, and were more likely to offer exercise activities open to all abilities, as well as inter-school games competitions. However, more PE HoDs in small schools offered inter-house or inter-tutor non-games competitions. The differences in provision between schools of different sizes probably reflect the logistical issues associated with offering a broad extra-curricular programme to meet the needs of all pupils given a fixed number of specialist staff and facilities. These issues and others relating to school size would need to be explored further.

7.7.4 Does Location Make a Difference?

The survey results revealed some differences in the views, approaches and practices relating to HRE between schools in different areas of England. For example, more PE HoDs in the South (than the North and Midlands) thought that HRE should have been an activity area within the PE curriculum and were more in favour of discrete HRE units. In contrast, a permeated approach through the activity areas was favoured more in the North and Midlands than the South. Overall, these results support the findings of earlier studies which have reported regional variations (Booth, 1986; Sharman, 1988) and suggest differing views of, and approaches to PE around the country.

More schools in the South than the Midlands or North included the teaching of suppleness and offered aerobics as an option within the PE curriculum. With respect to fitness monitoring, there was less fitness testing at KS four in schools in the South than in the Midlands and the North. Heart rate and blood pressure monitors and pedometers were used more in schools in the Midlands than the South or North. Such differences in theoretical and practical content are difficult to explain but may reflect some variation in the support for, and resourcing of HRE. In the extended curriculum, more activities took place at weekends in schools in the North than South, and more in the South than Midlands. In addition, non-games competitions were offered more in schools in the South than the Midlands or North, whilst inter-school non-competitive activities were offered more in schools in the Midlands than the South or North. Furthermore, more PE HoDs in the Midlands than the South and North considered that they offered a wide range of physical activities which were accessible to all. Variations in curricular and extra-curricular provision for HRE across geographical areas remain to be explored.

7.7.5 Contextual Constraints

In contemplating the position of 'health' and its chances of being incorporated within, or even defining, the NCPE in England and Wales in the late 1980s and early 1990s, one has to consider the lack of coherence and structure in much of the existing practice (Almond, 1983a; Biddle, 1989), the differing demands of HRE in terms of lesson content, delivery and assessment (Kirk, 1986; McNamee, 1988), and the implications of HRE for staffing and training (Almond with Dowling, 1987). Furthermore, the absence from the NCPE WG of a strong 'health voice' suggests that from the outset 'health issues' were not considered to be a primary concern in the development of the NCPE. Indeed, Evans and Penney (1995a, 1995b) have clearly highlighted what they consider to be the inherent inequalities of the NCPE WG with respect to the interests and voices included, excluded, privileged and subordinated, and in particular, they have pointed to the priority accorded to sport that the membership appeared to reflect. Undoubtedly, a critical matter in the development of the NCPE was the variation in status of the different discourses both within and outside the PE profession (Evans & Penney, 1995a, 1995b) and the compatibility, or otherwise, of HRE with 'traditional PE' and with the political and public emphasis on team success in PE (Evans, 1990; Penney & Harris, 1997). Indeed, some proponents of 'health' in PE themselves identified and portrayed the HRE movement as 'struggling against' the dominant sport-based curriculum, rather than being integral to it, and this perhaps also influenced 'health's' fortunes (Fox, 1992). Certainly, there was much concern amongst HRE proponents about the 'loss' of status signalled by the identification of HRE as a

theme rather than a distinct area of PE, and the consequent potential for it to be marginalised within an activity-based and performance-oriented PE curriculum.

Furthermore, in considering the context within which the NCPE was implemented, it is important to bear in mind the many pressures and demands schools face through them competing for finance, staff and pupils, and increased administrative workloads. In addition, the NCPE was 'implemented' within a context of 'flexibility' in the statutory orders to accommodate restricted and different resourcing for PE in schools. Given these circumstances, it is perhaps not surprising that, with the statutory orders permitting schools to address only four areas of activity at KS three, and not stipulating the allocation of time for the subject or between areas, there is little incentive for schools to radically re-design their curriculum or to go out of their way to address 'cross-curricular' or 'permeating' themes such as HRE. In Penney's view (1994), this meant that the NCPE could essentially be accommodated within existing practice in many schools, or with only minimal alterations made to achieve this. Thus, in effect, individual interests, expertise and circumstances were key factors in the design of the NCPE in schools, and different factors and different individuals constrained, facilitated or directed the implementation of the NCPE. The responses of PE departments clearly occurred within certain boundaries, notably the resources available (in terms of staffing, facilities and funding), their attitudes towards change, and relative freedom to pursue their own interests. There is little doubt that discourses privileged within the NCPE texts and defining features such as the areas of activity were significant in its 'implementation'. As a consequence, other discourses such as health were omitted from or subordinated in discussions and debates. For example, how health issues were to be addressed in the 'delivery' of the NCPE was a question that had been given only minimal attention by the PE department in one case study school.

In summarising contextual constraints, it is appropriate to view the implementation of HRE in the NC with reference to Bernstein's (1990) frames. The institutional frame is represented by the ERA within which the discursive frame takes the form of the NCPE with its inequalities in terms of the roles that individuals at various sites could play in its definition (such as teachers as 'receivers' of a curriculum designed by others). Furthermore, the NCPE was implemented within economic frames such as the constraint posed by the wider economic climate which demanded a curriculum with minimal resource implications. Political and ideological frames were also significant and were exemplified by privileged restorationist discourses, the need for efficiency and accountability in education, and the privileging of competitive games over other forms of physical activity (Penney, 1994).

7.7.6 HRE and the Inequity of Individualism

As previously reported (see Chapter 2, Section 5, 2.6), the dominance of individualism within conventional HE has incorporated the notion that much illness in society is self-inflicted and, with respect to HRE, this has resulted in individuals being blamed for not choosing to follow an active lifestyle and being accused of laziness, weakness and lack of motivation. This was to some extent exemplified by several PE teachers in the case study schools who viewed the pupils, in particular the girls, as 'lazy'. This was despite acknowledging the somewhat limited opportunities for them to be active, and the games-dominated and competitive nature of the PE provision (curricular and extra-curricular) which added to, rather than alleviated, the problem due to its lack of appeal for many young people, especially girls (Dickenson & Sparkes, 1988; Goudas & Biddle, 1993; Hendry et al., 1995). Thus, not only does the root of the problem remain (that is, relatively low activity levels amongst girls) but, as Cribb (1986) indicates, the side effect is that it blames those individuals for failing to resolve a structural problem that undoubtedly requires a coherent and collective response.

This exemplifies some of the reservations that remain about the relatively new concept of health promotion which potentially looks beyond traditional confines yet is frequently set within the individualist behavioural framework of the medical model (Rodmell & Watt, 1986). While education may be considered an appropriate strategy within individualism as it permits individual free choice and responsibility, Naidoo (1986) challenges the assertion that free choice exists within a market economy as it is often limited by environmental factors and commercial interests. Further, knowledge alone is considered insufficient to change behaviour or to make 'healthy choices, easier choices' since the means to act on that information must be available and this is likely to require significant transformation of the social conditions under which any choice is made (Naidoo, 1986; Rodmell and Watt, 1986). Certainly, the tendency of some PE teachers towards physiologically-dominated and fitness-oriented HRE programmes supports Cribb's (1986) claims that conventional approaches to health issues are often impositional, operate separately from people's lives, and make little attempt to assess people's wants or needs.

In considering whether the 'new' NC has led to the contestation of mainstream definitions and practices which Kirk (1992) believes is essential to any effective restructuring and transformation, it is interesting to note that both Morrison (1994), and Hendry et al. (1995) consider that the official curriculum for HE within the NC (NCC, 1990) is firmly in the mould of individualism, and similarly both Sparkes

(1991a), and Laws and Smalley (1994) refer to the dominant discourse of HRF/HRE as vehicles for the ideology of individualism. With particular reference to HE, Morrison (1994) points to its silence on the politics of health, and Hendry et al. (1995) state that, whilst it spurns the simplistic model of information-giving, it avoids discussion of fundamental inequalities in health and there is no attempt to empower people collectively to challenge or change the structural conditions which determine their well-being and health (p. 90). Such views support the assertion that the NC and NCPE are somewhat blind to structural inequalities and that, whilst HE and HRE seemingly promote the desired outcomes of real change (such as equity, choice, opportunity, freedom) which are seen as 'inherently good things' (Evans & Davies, 1993, p. 11), the practices of HE and HRE do not adequately account for the fact that some individuals are in a better economic, social, environmental and cultural position than others to make 'healthy' choices. Certainly, whilst HRE advocates (including myself) would argue that structural inequalities have not been ignored (see Almond, 1997; and also McKenzie et al., 1996), it is acknowledged that neither have they been defined as central to the problem. Furthermore, to date, minimal guidance has been offered either by advocates or critics on how HRE programmes could be developed within a more 'radical' framework, one which emphasises the social and physical environment as a major determinant of health and recognises the need to remove barriers to 'healthy choices', to focus on the community rather than the individual, and to have social change as the ultimate goal. Without such guidance (and this is clearly more likely to emanate from advocates than critics), it is unlikely that values relating to equity and freedom will be systematically expressed in the practice of PE or HRE.

7.7.7 Is Health a Threat to PE?

Within the PE profession, some fears have been expressed about PE's relationship with health, and the possibility that a health-centred PE programme might result in PE losing its uniqueness as an academic discipline (Young, 1995). McNamee (1988) has referred to 'paradigm shifts' and 'naturalistic fallacies' and similarly warned that the 'health' movement should be viewed with caution and might indeed result in 'the death of PE'. In effect, health is viewed by some as threatening to hijack PE. In Australia, for example, major curricular developments have resulted in PE being incorporated within a health framework (Curriculum Corporation, 1994). In the United States, Young (1995) warns the PE profession to beware of health being the primary goal of PE. In her view, this could make comprehensive PE programmes redundant and would considerably narrow the focus of PE and reduce it to a required period of moderate cardiovascular activity with a strong recreational component for motivation. Young (1995) emphasises that there are other vitally important reasons for studying about and engaging in physical activity. Seefeldt (1996) is similarly concerned about

the misunderstanding that physical activity can be substituted for PE. NASPE (1995) reminds physical educators that, while physical activity contributes to overall health and fitness, PE is a unique discipline which has a broader educational purpose than merely providing health-related physical activity and should take the form of a planned, sequential curriculum of developmentally appropriate movement experiences. NASPE (1995) has advised that, when working as part of a 'comprehensive school health programme', physical educators need to co-operate towards the goal of creating healthy students while also maintaining the uniqueness of PE as an academic discipline.

Clearly, consideration needs to be given to conceptual issues associated with the purpose and role of school PE and of HRE. PE has a variety of aims (eg. physical, social, psychological) which are met via a range of physical activity contexts (eg. dance, games, gymnastics) through which children develop in the cognitive, affective, psychomotor, and behavioural domains. Grounding the value of PE entirely in terms of the association between exercise and health, and building a case for frequent PE on the basis of the contrast between PE and academic work, may serve to contribute to the separation of mental from manual work and to narrow the educational value of PE (Tinning & Kirk, 1991). Over-emphasis on the functional characteristics of physical activity undoubtedly tends to narrow the purpose and value of PE and impoverish the subject. Tinning and Kirk (1991) believe that there is a danger that a pre-occupation with physicality and a neglect of the total learning experience could ultimately manifest itself in daily fitness rather than daily PE, the former being construed as a logical extension of the emphasis on physiological parameters by exercise scientists and the medical profession. Indeed, Tinning and Kirk (1991) have expressed concern over what they term the 'scientisation' of PE as a curriculum topic. In their view, the support for daily PE by the medical and related professions represents 'paternalistic intervention', an attempt to colonise, control and monopolise the area of child growth and development, and to make the area of personal health and its relationship to exercise, the exclusive domain of qualified experts.

Evidently, a functionalist approach has its limitations since PE involves more than engaging children in activity to improve their physical fitness - merely keeping children vigorously active would reduce PE to physical recreation or even drill. In critiquing daily PE, Tinning and Kirk (1991) have gone so far as to suggest that a HRPE programme which focuses solely or predominantly on physiological changes and neglects broader learning outcomes does not deserve to sustain the term 'education' in its title. On the other hand, however, it has been suggested that activity

levels within PE lessons are often low (Curtner-Smith et al., 1995, 1996; McKenzie et al., 1995; Simons-Morton et al., 1990, 1994; Stratton, 1995; Warburton & Woods, 1996), and that much time is lost in PE lessons giving roll call, providing instructions, or waiting in line to play. As a consequence, recommendations have been made for PE classes to 'waste less time and include more physical activity' and a U. S. health objective for the year 2000 is to increase physical activity during PE classes (Caspersen, 1994). Some HRPE studies in primary schools have shown that it is possible to increase activity time in PE lessons (MacConnie et al., 1982; McKenzie et al., 1993, 1996; Simons-Morton et al., 1988) but no such studies were found in secondary schools.

Whilst it is reassuring that the review of HRPE programmes reported positive outcomes in physiological, clinical, behavioural, cognitive and affective measures (Chapter 2, Section 4, 2.5), a number of limitations have been identified with regards to the content, delivery and evaluation of some of these programmes and gaps remain in the research (Harris & Cale, 1997a). In particular, longitudinal studies are required in order to draw any firm conclusions as to what extent PE contributes to children's health. Furthermore, much of the interest in the effectiveness of school PE seems to be framed within a debate over increasingly sedentary lifestyles and undesirable trends in physical activity and obesity levels, and thus some caution is required in not overstating the potential benefits of school PE. Nevertheless, the evidence reviewed seems sufficiently robust to support the claim that regular, well structured and conducted PE can potentially play a significant part in enhancing children's health. It also justifies the proposal that an important public policy conducive to the promotion of physical activity is commitment to HRE in the NC (Killoran et al., 1994).

There is little doubt that the apparent resistance to or ambivalence about HRE from within the PE profession stems partly from images of what might be described as poor quality HRE courses that are either predominantly activity-oriented (eg. blocks of totally directed aerobics, cross-country or circuit training) or are dominated by fitness testing. To my knowledge, such approaches have neither been created nor encouraged by key HRE advocates. Indeed, a review of resources and publications produced, or contributed to, by some of these advocates (Biddle, 1987, 1991; Bray, 1993; British Heart Foundation, 1994; Harris & Elbourn, 1989, 1990, 1991, 1992, 1997; Health Education Authority, 1990a, 1990b, 1992; McGeorge, 1989, 1993; Pain et al., 1997; Sleaf, 1994, 1995; Sleaf & Hickman, 1994) clearly reveals that a major objective has been to shift teachers away from approaches that involve any or all of the following: an over-emphasis on testing; directed 'huff and puff' activity with minimal learning; lots of teacher-talk; or, a whistle-stop tour of the 'three Ss' (stamina,

strength, and suppleness). In agreement with Talbot about the need to focus on 'good' rather than 'bad' or 'normal' practice (cited in Mannseur, 1992, pp. 62-4), the potential effectiveness of HRE should not be limited by judgements based on poor practice but on quality HRE programmes that effectively prepare young people for an active way of life. Clearly, much remains to be done with respect to ITT, INSET and support materials. However, without a concerted co-operative approach, the PE profession's contribution to increased activity levels of children and consequent improvements in the future health of the nation is likely to remain limited.

7.7.8 Section 6 Summary

In summarising this section on issues affecting implementation, it is suggested that individual and school characteristics as well as contextual constraints have influenced the expression of health within the NC. For example, some differences were detected in the views, approaches and practices relating to HRE between PE HoDs with less and more experience in that position. More experienced PE HoDs seemed to view HRE as an area which is more appropriately delivered to older rather than younger pupils and were more likely to include areas such as weight management and stress management. It is possible that these apparent differences may reflect changes in ITT over time. Differences were also found in the views, approaches and practices relating to HRE within different school types, sizes and geographical locations. In general, the state sector, with its legal obligation to deliver the NC, had a more structured approach to HRE and favoured discrete over permeated modes of delivery. In contrast, the independent sector tended more towards delivery of HRE in other subjects, whilst in PE it took the form of activity-focused and fitness-oriented units with minimal cognitive input. Fewer 'lifetime' activities secured a place in the apparently more traditional PE curricula of independent schools. HRE was considered to be more of a priority INSET need within the independent sector, and extra-curricular provision varied in its focus and degree probably due to differences in status and resourcing. With respect to school size, larger schools generally favoured discrete over permeated models of delivery and had a more structured approach to HRE. The theoretical and practical content was more wide-ranging in larger schools and there was greater awareness and use of HRE texts and resources. HRE was seen as more of a priority INSET need in smaller schools. In general, larger schools offered a broader range of extra-curricular activities at more varied times. Differences in provision possibly reflect the relatively easier logistical situation of large departments with more specialist staff offering a wider range of practical activities. The findings suggested the possibility of differing views of PE and/or some variation in the support for and resourcing of HRE around the country. For example, more PE HoDs in the South of England thought that HRE should have been

an activity area and favoured discrete HRE units whilst those in the North and Midlands favoured a more permeated approach. Variations in HRE provision between more and less experienced PE HoDs and between different school types, sizes and locations remain to be explored through further research.

In addition to developmental issues associated with any innovation (such as differing demands and support needs), the prioritising within the NCPE of performance (over participation), activity areas (over themes) and sport (over other forms of physical activity) has undoubtedly served, intentionally or otherwise, to subordinate the status and expression of health within PE. Competitive pressures and demands within and between schools, increased teacher workloads, and flexibility within the NCPE, have combined to maintain existing practice and to provide little incentive for innovative curricula design. The physiological dominance and fitness-orientation of some HRE programmes tends to support the notion that conventional approaches to health issues are firmly in the mould of individualism. Indeed, its dominance is partly exemplified by older girls in particular, being blamed for not following an active lifestyle despite some recognition that school PE provision and that beyond the school setting tends to add to, rather than alleviate, the problem. Thus, victim-blaming occurs rather than addressing fundamental inequalities in health and significant transformation of the social conditions under which activity choices are made. Until such time as guidance is provided on how HRE could be developed within a more 'radical' framework which emphasises the social and physical environment as a major determinant of health, values relating to equity, choice, opportunity and freedom are not likely to be systematically addressed in the practice of HRE or, indeed, PE.

Conceptual issues have been raised regarding the purpose and role of school PE and of HRE. For example, some fears have been expressed that, should health be the primary goal of PE, the subject may lose its uniqueness as an academic discipline and be reduced to required bouts of activity in the form of recreation, fitness training or even drill. The concern is that a pre-occupation with functional characteristics and physicality may lead to a narrowing of the educational value of PE. Some concern has also been expressed over the 'scientisation' of PE and 'paternalistic' intervention or even interference by the medical and related professions. However, HRPE programmes have reported positive outcomes in a range of health-related measures and there seems to be much potential for well structured and conducted PE to enhance children's health. Nevertheless, limitations have been identified with regards to the content, delivery and evaluation of some HRPE programmes and research needs remain. The apparent ambivalence about HRE from within the PE profession stems partly from images of activity-oriented and/or fitness testing dominated HRE courses.

However, a review of teaching resources indicates that such approaches have not been encouraged by HRE advocates. Indeed, it is argued that the potential effectiveness of HRE should not be limited by judgements based on such courses and that, without a committed approach to resolving issues associated with HRE, the PE profession's role in activity and health promotion will remain limited.

7.8 Section 7: The Future of HRE within the NCPE

This section looks to the future and considers the possibility of 'health' becoming a central concept within the NCPE.

7.8.1 Current Concerns and Future Possibilities

A commitment to and effective implementation of HRE is likely to remain difficult in light of the government's recent push for PE to be focused more explicitly on competitive team games with an emphasis on performance (DfE & WO, 1995; Penney & Evans, 1997), and the trend towards reduced PE time (Fairclough & Stratton, 1997; Harris, 1994c). Indeed, a recent consensus paper on the promotion of physical activity in England (Killoran et al., 1994) expressed concern that the educational reforms potentially hinder the provision of quality health-related physical activity education to young people, and that there is a danger that such provision is being squeezed out of the NC in favour of traditional competitive team sports, most of which are not played by adults (p. 219). In this respect, calls have been made for a commitment by schools to teaching health-related physical activity and exercise within the PE curriculum, in addition to the adoption of whole school approaches to promoting physical activity, enhanced support and training for those involved in the promotion of physical activity, and closer collaboration (eg. between teachers, parents and sports bodies) to improve availability of a broad range of opportunities for young people to engage in active recreation and sports (ibid, 1994). These issues are likely to be highlighted and pursued by the HEA in their current focus on young people.

Nevertheless, the potential for the expression and indeed privileging of health within the NCPE remains and it is to this potential that attention is now turned. How teachers can explore the flexibility inherent in the NCPE to privilege a discourse of health and design a curriculum which emphasises health, participation and physical activity, over and above one which focuses on fitness, performance and physical training will be pursued. The NCPE could have cited HRE as a central organising concept for PE with the role of unifying the subject, and thus, in effect, co-ordinating the range of diverse physical experiences which constitute a child's physical education. As the central rationale for PE, the development of HRE has a fundamental bearing on both the content and form of the curriculum, with an

understanding of theoretical concepts and the development of positive attitudes being recognised as critical to successful delivery. Approached in this way, HRE is consistent with the notion of 'PE as a process', but may be regarded as less compatible with a performance bias within PE. However, whilst there was certainly the potential to address these calls in the design of the NCPE (see Chapter 2, Section 3, 2.4), seemingly there was not the political will or desire to do so. Indeed, inconsistencies and contradictions apparent within the limited literature available (see Talbot cited in Mannseur, 1992) suggest a range of influences on the status of HRE within the NCPE.

Almond (HPEP, 1991, p. 3) provided an example of a model for PE in which HRE was identified as the core of all physical activities, as a foundation for performance and excellence, and a commitment to physical activity for life. This model is based on the rationale that HRE (a) provides a foundation for participation in purposeful physical activity, (b) promotes a way of life in which activity is valued and integrated, and (c) represents a potent force for enhancing health potential in that frequent and appropriate exercise (i) promotes sound growth and development, (ii) develops and maintains optimal functioning of the body systems, (iii) decreases the risk of certain diseases, and (iv) improves the management of some existing disorders (ibid, 1991). A further example of an integrated approach privileging health is evident in the recently revised Australian curriculum framework (Curriculum Corporation, 1994) in which 'health and physical education' is identified as a specific area of learning, and focuses on the significance of personal decisions and behaviours, and community structures and practices in promoting health and physical activity.

Clearly, other alternatives existed for the NCPE such as a PE curriculum founded on themes or areas of experience, examples being health, expressive movement, body management, and competitive and co-operative experiences, with each theme or area having its own PoS and a systematic form of delivery. However, a critical point to note is that, as the NCPE framework and requirements stand, it is still possible and arguably desirable for 'health' to be the unifying concept linking the separate activity strands. Certainly, with this rationale, it is possible to fulfil both the HRE requirements and the PoS for the areas of activity. For example, a rationale based on health issues can be identified for each KS as proposed by the HPEP (1991):

- KS one: promotion of sound growth and development
- KS two: appreciation of effects of exercise on health and roots for 'active living'
- KS three: acquiring skills to plan, follow and evaluate an exercise programme and development of 'active living'
- KS four: lifestyle enhancement

The above rationale for each KS can then form the basis for planning health-related learning outcomes to be delivered within a planned, progressive, and coherent programme. Thus, HRE concepts can be determined for each school year and term within a KS and these concepts, which form the basis for integrating the PE programme, can be delivered in focused lessons, either running in parallel with, or integrated through the activity areas (Harris & Elbourn, 1990). In this way, HRE concepts (such as recognition and understanding of the effects of exercise, and awareness of opportunities to pursue activities in and out of school) can be set within a coherent framework ensuring effective delivery to all pupils.

Within this unifying framework, there is a need to identify some critical factors of quality HRE programmes. They should encompass cognitive, physical, behavioural and affective components in order to comprehensively address the knowledge, understanding, skills and attitudes associated with the promotion of current and future involvement in health-promoting physical activity. The knowledge and understanding component should focus on the range of short and long-term effects of exercise on the physiological and psycho-social systems (see Mutrie, 1997 and Riddoch, 1997), in addition to awareness of opportunities to be active in the local community, and understanding associated with planning, implementing and evaluating a personal exercise programme. In addition, young people should be helped to understand that not all forms and amounts of exercise are health-enhancing, and that there are risks associated with excessive exercise and overtraining, especially when attempting to conform to images of the 'strong, athletic' male or the 'slim, desirable' female. As Colquhoun (1989) recommends, philosophic and humanistic aspects should be included as part of the legitimate knowledge base of HRE, and thus the PE curriculum needs to emphasise the social and physical environment as a major determinant of health and recognise the need to remove barriers to 'healthy choices', to focus on the community rather than the individual, and to have social change as the ultimate goal. With respect to skills, pupils require a sound foundation of a range of basic physical skills in order to feel competent in an exercise setting. Also, pupils should be helped to learn behavioural skills such as setting realistic goals, self-assessment and problem-solving, as proposed within the 'stairway to HRF' approach

(Corbin et al., 1985) and detailed in recent American teaching resources (Armstrong et al., 1993; Goggin et al., 1993). Furthermore, in agreement with Green (1994), in order to promote a desire to be active now and in the future, pupils should experience positive exercise sessions in which they achieve, progress over time, and are helped to feel comfortable and confident. Simons-Morton (1994) considers that this is achieved through pedagogical practices such as effective class management, maximum practise time, frequent individual feedback, instruction and encouragement.

Curriculum planners in PE need to be encouraged to strive for an NCPE that coherently and comprehensively addresses health in PE. Indeed, it is difficult to see how, without a co-ordinated and well structured planning strategy, PE programmes based solely on a range of separate activity areas can effectively deliver a coherent and integrated physical education for young people. However, in considering the freedom and capacity teachers have to develop alternative approaches, it is acknowledged that, even with the required drive and ability, teachers face a difficult task (see Sparkes 1986, 1988, 1990, 1991b, 1991c). PE teachers can achieve little without the support of departmental colleagues, senior management, governors, and parents, all of whom will need convincing of the merits of any deviation from what is the expected 'norm' for PE. Furthermore, matters of resourcing and, in particular, INSET cannot be overlooked. The frequent absence of these continues to shape much practice. Thus, it would seem that neither the text of the NCPE, nor the context in which it is being implemented, offers much encouragement or support for the development of 'alternative discourses' in PE. Nevertheless, being present in, rather than excluded from the NCPE text, certainly points to the possibility of a 'health discourse' finding some expression in practice, but there is little probability that the area-based PoS will be delivered within a theme-based curriculum, privileging integrated codes over and above collective codes (Bernstein, 1990). In reality, it is invariably an activity area-based PE curriculum that will be delivered, with health possibly marginalised within it. Of course, the longer-term impact of the NCPE (which may undergo some revision for the year 2000) on the pattern of provision for HRE remains to be seen. Despite OFSTED's (1995) acceptance of both discrete and integrated modes of delivery for HRE and a call for recognition and recording of good practice in HRE, given the current structure of the NCPE, there clearly remains some possibility but perhaps low probability that the rationale for retaining PE at KS four, that of encouraging young people to develop a fit and healthy lifestyle (Dearing, 1993, p. 45), will be addressed sincerely by the profession. It is certainly hoped that more physical educators may be encouraged to actively explore the possibilities inherent in the NCPE.

However, in considering the future expression and delivery of HRE in the NCPE, and whether and how 'flexibility' in the NCPE text will be explored, a critical factor is undoubtedly the training and expertise of PE teachers. Regrettably, it is not possible to be overly optimistic about the ability of either experienced or newly qualified teachers to develop HRE or to successfully address HRE via permeation models. In particular, attention is drawn to the insecurity of some teachers in approaching this area (especially older, part-time and non-specialist PE teachers for whom it may not have featured in their training), the limited attention given to HRE in present 'area-based' training courses (as evidenced through personal communication with colleagues in teacher education), the changes and reductions in ITT and INSET involving a shift towards predominantly school-based training (Evans, Penney, & Davies, 1996; Laws, 1996b), and a decline in local authority INSET provision (Evans & Penney, 1994). Furthermore, although this particular thesis has focused on the secondary sector, it is acknowledged that, despite claims that the primary school experience is critical to the development of lifelong exercise habits (Bray, 1991), the inadequacy of primary PE training is an area of much concern within the PE profession (Evans et al., 1996a).

The debate about the position, status and expression of health within the NCPE is still continuing. Indeed, the aims of a 1997 conference entitled 'Physical Education and the Health of the Nation' were to discuss the contributions that PE and sport make to the health and fitness of young people, and to indicate possible ways forward on the emphasis that should be given to the development of health and fitness in PE lessons (SCAA, 1997). Issues such as how health matters are being addressed in PE and the degree to which HRE in schools is contributing to the health of the nation are currently being debated by a HRE working group chaired by the author and initially set up within the forum of a newly-established (1996) higher education institutes (HEI) and schools partnership network. It is possible that the outcomes of the HRE working group (such as guidelines for good practice) might influence the place and provision of HRE within any future revision of the NCPE.

7.8.2 Section 7 Summary

This section on the future of HRE within the NCPE has highlighted the concerns which remain about the emphasis on sport and performance within the NCPE (DfE & WO, 1995; see Evans et al., 1996b) and the trend towards reduced PE time (Fairclough & Stratton, 1997; Harris, 1994c), both of which are likely to make effective implementation of HRE more difficult. However, there is clear support for the area from the Sports Council and the HEA (Killoran et al., 1994) who have called for a commitment from schools to teaching HRE within the NCPE and adoption of whole school approaches to promoting physical activity. In addition, although HRE was not cited as a central, unifying and co-ordinating concept for PE, the flexibility inherent in the NCPE still permits the potential for the expression of health in the form of a curriculum which privileges health, participation and physical activity. Indeed, as the NCPE framework stands, it is possible for 'health' to be the unifying concept linking the separate activity strands and for both the HRE requirements and the PoS for the areas of activity to be fulfilled. This requires that HRE concepts covering cognitive, physical, behavioural and affective domains are determined and delivered in discrete and/or integrated modes. Although PE teachers are being encouraged to plan a PE curriculum that coherently and comprehensively addresses health in PE, this is far from problem-free given the insecurity of some teachers in approaching this area, the limited attention given to HRE in professional development programmes and within NCPE-related resources, the changing nature of ITT and INSET provision (Evans & Penney, 1994; Evans et al., 1996b; Laws, 1996), and the problematic nature of curriculum change (Sparkes, 1986, 1988, 1990, 1991b, 1991c). In effect, neither the text nor context of the NCPE offers a great deal of optimism for the future development of HRE although being present in, rather than excluded from the NCPE certainly points to the possibility of a 'health discourse' finding some expression in practice. However, the probability is that an activity area-based PE curriculum will continue to be delivered with health possibly marginalised within it. Nevertheless, it is hoped that more physical educationalists may be encouraged to actively explore the possibilities inherent in the NCPE and to adopt a committed, comprehensive and coherent approach to the teaching of health issues within the NCPE. Current and future discussions about the place and expression of health within the PE curriculum will undoubtedly influence the status and provision of HRE within the NCPE for the year 2000 onwards.

7.9 Section 8: Ethical Issues

Issues relating to ethics, which has been defined as a matter of principled sensitivity to the rights of others (Cavan, 1977), can never be eliminated from research (Burgess, 1984a). A particular issue that had to be addressed within this research project related to my own anonymity. This was somewhat problematic because it was possible that, due to my involvement in delivering INSET and writing publications on HRE, some PE teachers might know of my work in the area. It was thought that this might influence those with particular biases towards or away from HRE with respect to their choice and manner of response. Whether or not to be explicit about research aims and the issues to be pursued is invariably presented as a matter of deciding to adopt either an 'open' or 'closed' approach (Burgess, 1984a). In negotiating access to sites and during the course of the research, the dilemma was faced as to how explicit to be about my research objectives. Certainly, achieving a balance between being open about the research purpose and avoiding disturbing the research setting seemed rather problematic. Following discussion with my supervisor and professional colleagues, it was considered prudent to provide some 'cover' for the specific health-related focus, by stating in the letter accompanying each questionnaire that the research involved 'selected aspects of PE within the NC at key stages 3 and 4' (Appendix A). Cohen and Manion (1994) state that if researchers do not want their potential subjects to know too much about specific objectives, then a simple way out is to present an explicit statement at a fairly general level. The possibility of training an interviewer to undertake the case study interviews was considered but was decided against mainly because of my personal desire to remain close to the case study process especially as it required continuous interaction between the theoretical issues being studied and the data being collected. In addition, it was felt that it would be possible to ascertain through preliminary telephone conversations whether staff in the case study schools associated my name with HRE work. Although the intention was to avoid influencing behaviour by being too explicit about my research interests, it is acknowledged that others may regard my actions as constituting some degree of disguise or deception.

Whilst the aim in my investigations was to avoid disturbing the research setting, it is recognised that any physical presence is to some degree 'disruptive' and that 'neutrality' in fieldwork may be regarded as somewhat of an 'illusion' (Van Maanen, 1982). Although the intention was to minimise my influence, investigation in one case study school highlighted that simply being there can itself have a marked effect on individuals and the research setting. Undoubtedly, the act of questioning can prompt subjects to address issues and possibilities that they may not otherwise have contemplated. For example, questions about ascertaining 'success' in HRE, led some

PE teachers to recognise the complexity of the issue in this particular area and to consider different ways of assessing pupils' learning. Furthermore, in one staffroom a teacher enquired as to where I was from and it came about that he knew my PhD supervisor well. The member of staff was keen to establish the link between my supervisor's area of work and my research and, to avoid being explicit about the specific purpose of the research, it was deemed necessary to make an excuse to politely exit the staffroom. The following day, in the same staffroom, a small group of teachers, including a member of the PE department, were curious about my background and enquired as to whether I had ever taught. On replying that I had taught for a total of twelve years in three different secondary schools, the next inevitable question was where. The three schools at which I had taught were in the same county as the school in question and the teachers were interested in when I was there and with whom I taught. I was careful to give honest but brief responses and was becoming very uneasy about the PE staff realising that I was the teacher that had been mentioned in several interviews who had been granted one year's secondment by the local LEA in order to study for a Master's degree in PE and to contribute to a county publication on HRF (Staffordshire LEA, 1989). I felt very uncomfortable about being 'found out' and I would not be surprised to learn that the PE staff 'worked out' who I was very soon after I completed the case study research in their school.

In order to protect the professional interests and the identities of individuals, schools and teachers have not been named within this thesis and referencing of all data is coded. Despite this, detailed description may mean that schools and individuals are identifiable to some readers as it is acknowledged that the use of pseudonyms can never guarantee that individuals will not be recognised by themselves or others (Burgess, 1984a). Indeed, detailed descriptions such as that obtained in case study work obviously increases the likelihood of recognition. Anonymity may help to widen the receptive audience for the work in that, whilst the findings are not generalisable in a complete form, many of the issues raised are pertinent and applicable to experiences in schools in other parts of the country. Also, with schools and authorities remaining anonymous, more readers may be encouraged to relate the findings to their own experiences.

The research process highlighted a few personal and professional dilemmas. One related to what might be termed as the 'hit and run' approach to the data collection, especially the case study data. I was left with feelings of guilt that I had used busy people's time in order to advance my personal research and left them with little or nothing for their efforts. In addition, I was all too aware of the personal disappointment in not having more positively influenced the provision of HRE in the

making of the NCPE (see Chapter 2, Section 3, 2.4.2). Furthermore, I was familiar with literature pointing to the gap between sport pedagogy theory and practice and the accusation that sport pedagogy research has not effectively influenced its real audience, that of teachers in schools (Cheffers, 1994; Kang, 1994). In fact, a personal desire in undertaking this research was to articulate and privilege teachers voices. However, it is recognised that merely writing a thesis is not sufficient and I agree with Burgess (1984) that it is essential 'to communicate with a wide audience' if your 'evidence is to be taken into account' (p. 216). This dilemma is only likely to be resolved if publication of the research findings in academic and professional journals and the writing of HRE resources for teachers informs and improves future practice in schools. To do this, it is clear that the research findings will need to be presented in an accessible and readable form and will need to address implications for the PE profession. It is hoped that recent contributions in the form of teaching resources (ACAC, 1997; Harris & Elbourn, 1997; PEA, in press) and my current and future involvement in the production of good practice guidelines for teaching HRE in primary and secondary schools will assist in bridging the theory-practice gap.

At a personal level, writing academic and professional papers proved to be a valuable analytical tool, particularly in the development of the theoretical framework. The act of writing promoted reflection on the data gathered and provided the opportunity for peer reviews of the research. It also fulfilled a personal desire to disseminate the research and to maintain the subject of HRE within academic and professional literature. A further dilemma arose, however, with respect to the academic pressures to publish in peer-reviewed journals as I felt that these would not be widely read by teachers, and, in addition, would delay the progress of the thesis (in terms of data collection, analysis and writing up). Indeed, the pressures of a full-time occupation along with expectations to publish at a particular level on a regular basis resulted in a difficult decision to dramatically reduce my involvement in HRE INSET for several years to provide myself with sufficient time to cope with the demands. Although this conflicted with my desire to provide PE teachers with practical guidance, I was in the fortunate position of being able to pass on much of the requested HRE INSET to a respected colleague whilst I pursued my studies and attempted to keep HRE on the agenda of academic and professional publications.

Prior to embarking on the research, it was necessary to consult the 'checklist guide of ethical principles to be applied in psychological and sociological investigations' from the Ethical Advisory Committee of Loughborough University of Technology. Within this guide it stated that it was not necessary to complete the checklist for research training involving structured, semi-structured and unstructured interviews or self-

administered questionnaires. Nevertheless, the checklist was carefully consulted and the completed form was lodged with the head of the Department of Physical Education, Sports Science and Recreation Management, Loughborough University.

7.10 Section 9: Limitations

Practical and theoretical considerations influenced the research design. It is acknowledged that an investigation focusing only on schools and drawing on information provided predominantly by PE HoDs can provide at best only a 'partial picture' of the implementation process. Undoubtedly, the investigation of 'micro, macro and meso' (Hargreaves, 1986) levels is critical to gaining an understanding of the process as a whole, and establishing why individuals at any one site (such as a particular school) acted as they did. An holistic approach (Fetterman, 1984; Lutz, 1986) would need to have encompassed multiple sites and multiple policies. Certainly, it is desirable to avoid 'incomplete' explanations of 'change' and to acknowledge the influence of many individuals, interests and other policies in the process. However, constraints associated with time and finances necessitated a focused approach to the design resulting in a decision to base the research on teachers in schools.

The limitations of the selected research methods are acknowledged, such as the tendency of surveys to be time and culture-bound with minimal consideration of social change and application to other cultural settings. However, Marsh's (1982) discussion and challenge of the anti-positivist criticism of surveys was helpful in recognising that the survey method is merely a tool and, like any other tool is open to misuse, yet used appropriately has much to offer. Follow-up case studies partially addressed the issue of time triangulation, and space triangulation was partly accounted for in terms of the broad geographical area covered by the survey and case study samples (Denzin, 1970). The research took place during a period of immense change in schools and, whilst the author felt privileged to be in a position to monitor the effects of a 'new' NC and NCPE, the survey undertaken one year after the introduction of the NCPE could nevertheless be viewed as a mere 'snapshot' of the situation. It is of course possible and likely that the situation has changed since. The case study research which took place almost two years later may to some degree have 'captured' the state of change with respect to HRE issues within those particular schools. Another possible limitation of the survey research design which became apparent during the research process was that only one questionnaire was completed per school. As highlighted by a comment on one questionnaire (Chapter 4, Section 6, 4.7), this may not have adequately reflected the range of views, approaches and

practices of both male and female PE teachers, especially in schools where practices differed for girls and boys.

The research only addressed schools in England. The specific investigation of schools in other areas of Great Britain is a potential development, particularly in Wales as the NCPE similarly affects schools in England and Wales. Furthermore, the research focused predominantly on the curriculum at KS three and four and thus was based mainly in secondary schools. The focus on the secondary sector reflected my own experience and interests. However, there is no doubt that the primary context is an important area for further research as is the education sector catering for the sixteen plus age range. It is also acknowledged that the research excluded designated special schools. Primary, secondary and special schools represent very different contexts for the implementation of the NC. Unfortunately, the limitations of time and finances prevented a detailed investigation of each of the above contexts.

Whilst the survey addressed both independent and state schools, the case study research only addressed state schools. The specific investigation of independent schools is a potential development from this research. Similarly, in addressing state schools, no attempt was made to devote special attention to grant-maintained schools or to single sex state schools. These also represent potential future foci for research. It is further acknowledged that the case study research took place in only three schools. However, these were located in different LEAs and areas of the country and involved lengthy in-depth interviews with all members of the PE department, in addition to exploration of relevant documentation. The intention was not primarily to generalise from the case study research, but to have regard and respect for the particular, first-hand experience, and the actor's point of view (Schofield, 1990). Furthermore, as indicated within this thesis, the expression of HRE within curricular and extra-curricular programmes is potentially influenced by the characteristics of both the PE HoD and the school context. Clearly, all of these are worthy areas of investigation in the future.

In-depth information was not obtained about the teaching and learning styles adopted when teaching HRE or the relative effectiveness of different models of delivery for HRE. This information would need to be explored through observation and analysis of lessons, and interviews with both teachers and pupils, and possibly also with parents/guardians. Ideally, research on the implementation of HRE in the NC should also address pupils' responses to the provision made. As 'actors' in the implementation process, they play a key role in determining the effects of the

provision (Apple, 1982). However, it was felt to be beyond the scope of this research project to incorporate this perspective.

It was acknowledged that various forms of 'contamination' of the data were possible at different stages of the research process. Within the case study methodology in particular, it was possible for myself as the interviewer and analyst to 'affect' the data, intentionally or subconsciously. It was also possible that the interviewees influenced each other through conversations about the interview process or subject matter. Additional potential sources of contamination of the data were the media and publications on the subject matter. Awareness and acknowledgement of possible contamination were integral to the critical issue of reflexivity. Indeed, I acknowledge my own close personal involvement with the 'subject matter' and recognise that I would most probably be identified by other PE professionals as a 'health advocate'. In acknowledging my own standpoint at the outset and during the research, I have been at pains throughout the process to minimise the potential influence I might have had on the way in which respondents co-operated and contributed. For example, measures were taken to avoid respondents associating my name with the HRE area (such as omitting authors' names on some texts specified within the questionnaire). Although I believe myself to have been extremely careful in adopting an objective and open-minded yet rigorous approach to the research, I am nevertheless aware that researchers can be criticised for adherence to particular theoretical orientations. Certainly, future research may benefit from more attention to investigator triangulation in an attempt to maximise the validity and reliability of the data. For example, the use of more than one investigator with differing perspectives or paradigmatic biases could be used to check the extent of divergence in data collection, analysis and reporting.

The selection of data for reporting was influenced to some extent by the inevitable time and space constraints. Much interesting contextual data was collected on PE department structures, teachers, facilities and funding. Most of this was omitted from Chapter 4 but has been reported in Appendix G and in publications and conference presentations (pp. xiii-xiv).

Finally, I acknowledge my limited previous experience of research (a Master's degree project) and agree with Hammersley's (1984) description of his own research as a 'voyage of discovery' in which he became aware of gaps between idealised versions of research appearing in text and available accounts of actual research practices (p. 62). The latter stages of this research also led me to appreciate de Vaus' (1993) comment that 'It is often not till we write up the research and try to make sense of the results

that we find out how we should have done it' (p. 58). However, thanks to the writings of Hammersley (1984) and de Vaus (1993) plus those of Burgess (1984a, 1984b), Delamont (1984) and Ball (1984), I did not feel too much 'at sea' during my voyage and would probably not radically alter the route if I was setting off again.

Chapter 8: Conclusion

8.1 Introduction

This final chapter is presented in three sections: (1) a picture of health?: this section summarises the main points from the discussion, (2) issues and implications: this section considers issues raised by, and implications of, the research findings, and (3) recommendations: this final section proposes recommendations for future research and practice.

8.2 Section 1: A Picture of Health?

Within the limitations of the study (Chapter 7, Section 9, 7.10), the research aimed to explore and describe the way in which HRE was being viewed, approached and delivered in secondary schools in England. Specific objectives involved exploration and documentation of the views, approaches and practices relating to health issues within the NCPE, and the identification of potential factors influencing the approach to and provision of HRE. In providing a picture of the 'state of the art', the research revealed that PE's explicit contribution to health within the NCPE has generally been welcomed, and is being approached in a variety of ways. Since the introduction of the NCPE, the majority of state schools have a written scheme of work for the area, some schools have devoted more time to HRE, and there is a desire among teachers for more HRE INSET. However, this is tainted somewhat by the realisation that some schools have no designated HE co-ordinator and no written commitment to HRE, much of the teaching of HRE through the PE activity areas lacks structure, and there is inconsistent guidance and limited attention to health issues in ITT, INSET and NCPE-related resources.

In exploring the philosophies, constraints and opportunities influencing particular approaches to HRE, the case studies revealed a degree of confusion about the concept of HRE and wide variation in its status and expression within PE. In practice, interpretation ranged from relatively unstructured contributions within the activity areas, discrete and somewhat 'isolated' units, and opportunist 'lesson disruption' and 'wet weather' inputs. Some programmes resembled little more than a new name to 'old' content (such as cross-country and circuit training), often with limited involvement of learners. There was consensus on some theoretical areas but not on others and the depth of information varied although tended to be basic. A minimalist approach had generally been adopted to areas such as 'personal exercise programming' and the 'role of physical activity in weight management'. Indeed, the findings confirmed the view postulated at the outset of the research (see Chapter 3,

3.1), that the concept of HRE is diverse, wide-ranging and multi-dimensional, and has different meanings for different people. A similar situation was found in the Spanish PE curriculum (see Velert & Devis, 1995). This concurs with Sparkes' (1991b) expectation of an innovation, and Almond (1997) suggests that the 'huge variety of practice' is a consequence of the process and the time frame of innovation which involves the translation of new ideas into practical possibilities which are assimilated and accommodated by early adopters, then by interested teachers, and later by the majority of teachers (p. 3).

Most PE teachers clearly preferred to organise HRE in the form of discrete units, based on the premise that the 'permeation' only model of delivery is more difficult to implement and/or less effective than other models. However, much of the content of discrete units tends to be dominated by fitness approaches and, in some schools, by activity without learning. Furthermore, there was little evidence (in schools with or without discrete HRE units) of a well-planned and co-ordinated approach to integrating health issues within the activity areas. This research confirms the findings of others that health issues are not finding systematic expression through the PE activity areas in many schools (Curtner-Smith et al., 1995, 1996; Penney, 1994; Penney et al., 1994a, 1994b, 1994c). In effect, and for a multitude of reasons, permeation does not seem to be happening in practice, hence the claim that secondary school PE in England has remained largely unaffected by the HRE movement (Curtner-Smith et al., 1995, 1996), a claim which can, however, be challenged on the basis that it completely overlooks the prevalence and impact of discrete forms of HRE.

Discrete approaches to HRE in PE possibly reflect teachers' lack of faith in a permeated approach (McKenzie, 1994) and the limited 'changes' that have occurred in accommodating the NCPE requirements (see also Laws & Smalley, 1994). Indeed, discrete units of HRE may protect the activity areas allowing them to be left 'untouched' or only minimally affected by the development of HRE. This may account for HRE being approached as a 'tagged-on' addition to, rather than an integrated element of, the PE curriculum. Thus, rather than the central rationale or a focal point for PE, HRE has been essentially incorporated as an additional component within 'traditional' games-dominated and performance-oriented PE programmes. The prominence of vigorous activities and testing procedures exemplify the 'fitness' orientation of many HRE units. Health advocates have themselves been critical of such approaches, and have even described some HRE programmes as 'training' rather than 'education', merely involving adaptation to a HRE setting of the performance rationale underlying the traditional sports-based programme (Fox, 1992, p. 9).

Similarly, Colquhoun and Kirk (1987) have described the way in which Australian PE teachers design, teach and evaluate their programmes as 'more to do with fitness for successful competitive sports performance than fitness for healthy living' (p. 106). Velert and Devis (1995) believe that an important challenge for the 'health movement', and one which is critical in order to make PE a legitimate educative undertaking, is overcoming the physical fitness and sport performance emphasis when approaching the relationship between health and exercise (p. 51). The above critiques are not far removed from those made more recently (OFSTED, 1996a; SCAA, 1997a, 1997b), and serve to highlight the combined influence of numerous factors on professional practice. These include the effect of prevailing ideologies and trends, undoubtedly reinforced by the 'sporting' background and 'sports science' based training of many PE teachers. Furthermore, HRE practice has tended to reflect, rather than challenge, inequities in PE. As found by Laws and Smalley (1994), contextual constraints as well as school and individual characteristics have clearly affected the position and provision of HRE.

The research suggests that the expression of health in the NCPE to date has major shortcomings, particularly in relation to the mismatch between policy and practice. The tendency for health issues in PE to be viewed as a 'spin-off' and/or to have a 'fitness' focus has for some time created concern about the gap between intentions and outcomes (Almond with Dowling, 1987, p. 141). In effect, in some schools, HRE provision remains partial and incomplete, represented by an 'incidental', unplanned, haphazard approach. In these schools, whilst the rhetoric might imply value and status, the practice is superficial and patchy. Even in schools with more explicit forms of delivery, HRE tends to retain an indeterminate, ambivalent and peripheral position within the PE curriculum. The paradox is that whilst some individuals and institutions place high priority on PE's contribution to health, there are pressures within the system and the subject which tend to squeeze it. However, this is not altogether surprising given that 'health' was granted the status of a 'subordinate' theme rather than a prominent area, and given the pressures and constraints of the context of implementation (Evans & Penney with Bryant, 1993; Graham with Tytler, 1993; Penney, 1994). This combination of 'text' and context has typically produced 'minimalistic' responses to the 'health' requirements of the NCPE and 'accommodation' within present practice (Penney, 1994). This goes some way to accounting for its marginalised status and the narrow interpretations of HRE that abound.

The following are proposed as underlying factors contributing to the current position and expression of health issues in PE:

- (a) its relatively 'new' existence as an area of study
- (b) the conceptual confusion and scientific/medical discourse surrounding it
- (c) the influence of prevailing ideologies (eg. individualism) and trends (eg. scientific functionalism and technocratic rationality)
- (d) limited (and reducing) PE time
- (e) the limitations of an 'activity-area' based framework for the NCPE
- (f) reluctance to amend or interfere with the teaching of the activity areas
- (g) the emphasis within the NCPE on performance and competitive games
- (h) the attention to sport from within and outside the PE profession
- (i) the difficulty of 'permeating' HRE concepts through the activity areas
- (j) insufficient motivation and/or time in schools for liaison with colleagues
- (k) its requirement of collaboration across activity areas and subject boundaries and attention to the extended and hidden curriculum
- (l) limited attention to HRE in ITT, INSET and NCPE-related resources
- (m) teachers' lack of knowledge and confidence in delivering such content
- (n) the 'sporting' background and 'sports science' training of many PE teachers
- (o) its requirement of a wide range of teaching methods and modes of assessment.

8.3 Section 2: Issues and Implications

Although PE was initially established on the basis of its contribution to children's health in the form of therapy for physical defects, it has clearly since broadened its aims (Kirk, 1986). However, 'health' issues in PE took a 'backseat' until the early 1980s when the 'new health consciousness' emerged (Crawford, 1987; Tinning, 1990) and attention focused on the role of physical activity in the prevention of hypokinetic diseases, recognition of the high costs of curative medicine, and a shift towards the promotion of healthy environments and lifestyles. As a consequence, PE's role in disease prevention (and later, in health promotion) were highlighted and HRF emerged with the former as its early focus (Kirk, 1988). However, as outlined previously (Chapter 2, Section 5, 2.6), the rationale, foci, motives, inspirations and terminology associated with health issues in PE have evolved over time and will no doubt continue to do so. Table 8.1 represents a proposed development of McNamee and Almond's (1991) earlier conceptual analysis of the development of HRPE, incorporating what the author considers to be additional phases in the evolution of health issues in PE. Recently, Almond (1997) has identified distinct phases in the development of HRPE in England, explaining that each phase does not necessarily supersede the previous one and, thus, at any one time, the range of teachers' practices

may be vast. He describes change as 'slow and cumbersome' due to the inevitable 'state of change' of new developments and the difficulty of accessing such ideas (p. 3).

It is evident that there remain many issues, key questions and associated concerns with respect to PE's contribution to HE (see Table 8.2). Such issues have undoubtedly been addressed in some schools but have yet to be addressed in many others. Key issues for schools include:

- * Whose responsibility is HE? Does PE have a part to play? Is health part of PE or vice-versa? What are the relationships between PE, fitness and health?
- * Is HRE unrecognised, unrecognisable, or merely unplanned and uncoordinated? Is actual coverage patchy, left to chance, missing key areas? If there is a specific programme, is it related to other PE experiences?
- * Is it given too little emphasis and time because of its low status? Is there too much emphasis on physiological factors to the exclusion of social and emotional factors? Is the HRE content sufficiently practical and relevant to young people's present decision-making situations and capabilities?

A SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis can be used as an evaluative tool to identify aspects requiring attention. An attempt at such an analysis relating to health issues in PE is presented in Table 8.3.

Table 8.1 Conceptual Analysis of the Development of HRPE (adapted and developed from McNamee & Almond, 1991)

	Phase 1: 1983	Phase 2: 1986	Phase 3: 1988	Phase 4: 1994	Phase 5: 1997
Rationale	Prevention of heart disease	Enhanced functioning of body systems	Personal well-being	Activity promotion	Health promotion
Focus	Introduce new courses on fitness	Make exercise a positive experience	Sound rationale for the promotion of HRE	Increase activity levels	Valuing activity and incorporating it into daily life
Motive	Put exercise on the PE agenda	An alternative to competitive sport	Change the PE pedagogy	Shift away from fitness approaches	Improved integration of health, PE and sport
Inspiration	Physiology	Psychology	Philosophy	Behavioural psychology, epidemiology	Public health
Terminology	HRF	A health focus in PE	HRE	HRE, HRPA	HEPA, HPPE, HEPE

Table 8.2 HRE Issues, Key Questions and Associated Concerns

Issues	Key Questions	Associated Concerns
Role and Status	What is HRE? What does it represent? Is it important and why? How does it relate to HE? How does it link with the PE activity areas?	Rhetoric implies importance; Reality suggests otherwise (relatively low status of HE in NC and of HRE within NCPE)
Content	What does it involve? What does it look like? What is its theory content? What is its practical content?	Confusion regarding what HRE is and looks like; Narrow interpretations such as a specific focus on any one of the following: vigorous activity; warming up (and cooling down); physiological effects; fitness testing; specific 'fitness' activities (eg. aerobics); providing activity opportunities; Psychological/social/behavioural issues ignored (emphasis on physiological/cognitive issues); Theory: minimal or overboard; Practical: viewed by some as 'mindless repetitive copying' activities of limited educational value
Delivery	What teaching methods are appropriate? How can activity 'behaviour' and 'independence' be promoted? How can theory and practice be balanced? How should the teaching of HRE be organised? (integrated, discrete, combination) How can all teachers deliver a common understanding of HRE?	Requires extensive range of methods yet teachers falling back on the familiar; Concern regarding potential reduction of activity; To permeate or not? A professional decision or a directive from above?
Assessment and Evaluation	What represents evidence of learning? How can teachers judge effectiveness and success?	Teachers are unsure about evidence of pupil learning (eg. designing exercise programmes); Effectiveness is difficult to judge with respect to attitudes and behaviours
Resources and Support	Where is help and guidance available from? How should teachers deal with conflicting advice?	Inconsistent advice from profession; Little/no HRE guidance in activity-based resources and minimal attention to HRE in ITT and INSET

Table 8.3 SWOT Analysis Relating to Health Issues in Physical Education

STRENGTHS

Schools are logical environments to influence health behaviours

Qualified PE teachers and exercise instructors

Health viewed as an inherent good and 'everyone's concern'

Physical activity popular across various groups

Range of teaching styles and learning situations

OPPORTUNITIES

Education Reform Act (ERA) & NCPE

OFSTED Inspections/Reports

Public concern about children's activity levels, and their current and future health

Government attention to public health

National 'physical activity' campaign (HEA)

Community alliances and partnerships

WEAKNESSES

Conceptual confusion regarding health, fitness, physical activity

Impact of underlying ideologies and influencing trends

Health viewed as 'everyone's concern' but 'nobody's (or someone else's) responsibility'

Myths such as HRE viewed as anti-sport and anti-competition

Limited support in the form of ITT, INSET, NCPE-related resources

THREATS

Activity-area framework for the NCPE

Marginalised status of 'themes' in the NC and NCPE

Games-dominated PE curriculum

Emphasis on sport and performance

Conservatism of PE profession

Health viewed as a threat to the subject of PE

Diminishing time for PE

The various debates about the content, organisation and educational worth of HRE (see Almond & Harris 1997a, 1997b; Harris, in press) are no doubt set to continue. The 'delivery debate' tends to be a dominant feature, there being those who favour discrete forms of HRE (BAALPE, 1994; Mahoney, 1993; McKenzie, 1994), others who consider that it 'is best achieved in the context of the areas of activity' (Clay cited in SCAA, 1997a, p. 18), and still others who prefer a more flexible approach involving a range of models of delivery (Harris & Almond, 1994). Indeed, Almond (1997) has recently stated that:

...instead of health-related fitness being seen as a discrete objective within the aspirations of physical education and therefore delivered in schools as a separate unit often divorced from the central thrust of the curriculum, we need to consider it as something that **permeates** our philosophy about the values of physical education and the delivery process in schools. Thus, it becomes a pedagogical concern (p. 5, original emphasis).

Almond's (1997) reference to pedagogy clearly highlights that the attention paid to the 'mode of delivery' represents a major distraction, dwarfing more important issues such as clarification of the health concepts to be taught and how they might be effectively communicated to children. Increased attention to these areas and to curriculum mapping processes will undoubtedly improve the integration of health, PE and sport. Interestingly enough, Williams (1981) considers that an integrated approach might possibly develop from a discrete approach although he emphasises the difficulties involved in nurturing such growth. However, it is likely that the next phase in the development of HRE will involve attention to critiques (from both 'health advocates' and other key professionals) of HRE practice, and will result in improved planning of HRE and better integration of health issues within PE and sport. Clearly, there is a need for a coherent approach that avoids the teaching of isolated concepts which remain detached and disconnected from learning experiences within the PE activity areas, and those beyond the PE and school curricula.

In addition to the gaps in, and inadequacies of the NCPE texts, the 'health lobby' in PE remains accused of not responding adequately to critiques regarding the ideological content of health-related initiatives in PE, and their social, cultural and political origins and consequences. Indeed, Kirk's vision of PE 'being on the threshold of a dramatic re-orientation' in the late 1980s has no doubt been much delayed in practice by the conceptual confusion associated with the area, and the individualistic approach and associated neglect of social issues constraining health (Colquhoun, 1990; Sparkes, 1991a). In effect, it seems that neither the NC, the NCPE, nor the dominant

discourses of HE and HRE, have adequately addressed these issues. In this respect, Evans and Clarke (1988) may have been right in criticising the HRE movement for not challenging existing social or ability hierarchies or the social roles or rules which govern them. However, in agreement with Colquhoun (1989), while for some physical educators, the health movement may have brought about only surface changes, for others (myself included), it has prompted ideological changes involving the adoption of new beliefs, values, and attitudes. Thus, the effect of the 'health movement' has been variable but there has clearly been an effect and one which is set to be enduring. It remains questionable, however, as to whether this movement could, by itself, be expected to effect widespread, substantial and significant change.

8.4 Section 3: Recommendations

In undertaking my own research and reviewing that of others, it is evident that there remain numerous research needs in the area of HRE. Clearly, more socially critical research is desirable, that is research which questions underlying and taken for granted premises and conventions of PE (Rovegno & Kirk, 1995, p. 448). Research into HRE is required at the macro-level such as exploration of the relationship between societal changes and the school curriculum for 'health'. Other examples include exploration of Kirk and Colquhoun's (1995) assertion that the development of HRE has been influenced by a new 'health consciousness', and that school-based HRE programmes influence the social practices through which they themselves have been influenced. Research into HRE is also required at a micro-level with attention paid to the social, cultural and organisational processes of teaching and learning about health issues in PE, and to children's experiences of such issues and how they make sense of, and respond to them. Interpretative research is required to develop an understanding of how, why, to what extent, and with what consequences, PE teachers are influenced in their policies and practices. Critical appraisal of the teaching of HRE should assist in the identification of hidden assumptions behind the rhetoric. A further research need that was identified through the review of formally-evaluated HRPE programmes is for more longitudinal studies and greater emphasis on monitoring affective, behavioural and cognitive outcomes (Harris & Cale, 1997a). This is allied to renewed attention to research providing evidence of the effectiveness of school-based programmes as a public health strategy, coupled with a shift to more robust designs, improved measurement approaches and instruments, and more appropriate analysis strategies (Almond & Harris, in press; McKenzie et al., 1996; Stone, 1996).

Following Colquhoun's (1992) advice, a further recommendation is that consideration be given to what an emancipatory HRE programme would comprise and how it might be delivered within a school and community setting. It would undoubtedly involve

teachers in considering wider social, environmental, and cultural issues, and the needs and aspirations of a multi-cultural and socially diverse population. It would also involve the notion of 'cultivating or nurturing lifestyles and life choices' rather than 'regulating lives' (Kimiecik & Lawson, 1996). This would entail educating pupils about the environmental and political limits to health (Colquhoun, 1989; Sparkes, 1989). Literature on the social, environmental and behavioural factors associated with physical activity in youth should help to inform such contributions (De Bourdeaudhuij, in press; Sallis, 1994a, 1994b, in press; Shropshire & Carroll, 1997; Taylor, Baranowski, & Sallis, 1994; Wold, in press). Velert and Devis (1995) provide an example of a curriculum model for HBPE which maximises the strengths and minimises the limitations of the medical, psycho-educative and socio-critical models of HE, and the national curriculum framework for 'health and PE' in Australia (Penney, 1997) may represent a useful model of how to facilitate 'critical consciousness' in pupils.

A further recommendation proposed by Almond (1997) is for a 'health-related physical activity pedagogy', central tenets being a commitment to 'every child' and to 'personalising' activity (pp. 5-8). It is his belief that PE can make a contribution to the health of the nation if it succeeds in 'helping young people to learn to love being active' (p. 8) which involves a commitment to key pedagogical principles. An example of this in practice might be (a) broad recommendations for school programmes promoting physical activity among young people (see U. S. Department of Health and Human Services, 1997), (b) curriculum principles (see Velert & Devis, 1995), and (c) clearly identifiable characteristics of quality HRPE lessons (see McKenzie, 1996, p. 426), all of which can be used to guide teachers' practices. The intention is that future guidelines for teaching HRE in schools in England will incorporate 'procedural clarity' (see Fullan, 1982). To date, recommendations are that HRE should:

- * be an holistic concept embracing cognitive, affective, physical, behavioural, and affective domains
- * be broad in aims, content, methodology and assessment
- * be planned and sequential
- * link with all PE experiences and with other curriculum subjects
- * link with the extended and hidden curricula
- * emphasise pupil involvement
- * facilitate a participative and active role for pupils
- * develop 'critical consciousness' in pupils
- * relate to pupil's self-concept and their social relationships

- * involve family and community.

As schools represent a logical environment for promoting public health through physical activity (King, 1994; Sallis & McKenzie, 1991), it is further recommended that innovative experiential HRPE programmes be designed (see McKenzie et al., 1993, 1996), preferably as a component of a wider community coalition (see King, 1994). Given that the school day cannot easily be modified and that increasing the frequency and duration of school PE is difficult because of subjects competing for limited time, PE time clearly needs to be used efficiently and effectively. The CATCH project has demonstrated the potential for implementing a standardised intervention, using existing PE time and staff, to positively affect young people's activity levels (McKenzie et al., 1996). A further recommendation is that the PE profession capitalises on its 'activity promotion' role and acts upon the following suggestions for successfully developing healthy active lifestyles in young people (Hendry et al., 1995; Wortley, 1994):

- * integration of the theory and practice of health issues
- * recognition and rewarding of participation as a valued activity
- * increased emphasis on sociability, enjoyment and competence
- * involvement of young people in planning
- * consideration of the 'attractive' features of physical activity for young people
- * understanding of 'competing' leisure and social activities for young people
- * greater awareness of the effects of the mass media in projecting 'desirable' social stereotypes which may hinder the promotion of physical activity.

It is also worth noting a recent study which indicates that young people's perceptions of health may differ markedly from those of adults (Aggleton et al., 1996), and research on goal perspectives theory which suggests that if physical educators can develop methods of fostering 'task orientation' in children, then perhaps 'the stage may be set for the adoption of habitual physical activity through adolescence' (Spray & Biddle, 1997, p. 88). Certainly, moves towards the 'active school' (Cale, 1997a, 1997b; Fox, 1996; McGeorge, 1997) are encouraging although the multitude of influences and constraints on teachers' practices, and their limited awareness (and perhaps acceptance) of the volume of activity associated with health benefits may hinder the potential effectiveness of PE's role in activity promotion.

In order to address key pedagogical issues in the teaching of HRE, support is clearly required in the form of curriculum materials, training and consultation services which focus on the effective integration of theory and practice, and the adoption of teaching

methods based on the active involvement of pupils. Well evaluated curriculum and staff development models exist which are designed to promote physical activity and to modify environmental conditions affecting equity (McKenzie et al., 1993, 1996). These could form the starting point for future evidence-based research programmes in England. Indeed, the literature suggests that, without investment in professional development, innovations have little chance of developing and may continue to be characterised by limited alteration to teachers' attitudes and practices. Carreiro da Costa and Piéron (1997) similarly refer to profound differences between 'curriculum as text' and 'curriculum as action' and, whilst remaining optimistic about the future, they acknowledge that much remains to be done in research and curriculum development.

Having completed this particular research project, I remain in agreement with Kirk that HRE is not a 'passing fashion' (1988, p. 123), but is rather an enduring and core component of PE. I also support Sparkes' (1991a) broad description of the health movement in PE as 'international, multidimensional, multifaceted, ambiguous and shifting' (p. 204). Clearly, innovation is a complex, multi-layered and multi-dimensional process which is neither rational, linear nor value-free, inherent in which are tensions associated with the costs and rewards involved in change (Ball, 1987; Dalton, 1988; Fullan, 1982; Sparkes, 1990a, 1990b, 1991b, 1991c). Innovation demands planning, reflection, flexibility, energy and sensibility (see Sparkes, 1986, 1988). Above all, it requires time, and as Nias (1987) points out, teachers' 'lack of time for discussion, and scepticism about its value as a crucial tool in the modification of personal and professional perspectives are particular obstacles to change' (p. 137). Sparkes (1988) considers that, to avoid teacher isolation and an inevitable widening of the theory-practice gap, teachers need time and space to become engaged in transformation of their own practices in order to permit the possibility of 'innovation with change' (p. 173). Velert and Devis (1995) suggest that innovation should not fall on the shoulders of individual teachers but be a shared task, and ideally requires government policies to free time within the system for teachers to meet and reflect upon their professional practices. However, in looking to the future, such policies seem unlikely. Furthermore, the 'security' and 'status' of the repositioning of HRE from the original NCPE (DfE & WO, 1992) remains to be seen. Arguably, the 1995 revision has put HRE issues more to the forefront of the text, but it remains questionable as to how much this has been reflected in curriculum planning and practice. Stratton (1995) refers to the repositioning of HRE as 'sidelining' and 'derailing' and clearly interprets it as 'demotion' (p. 22). In addition, there is still a notable absence of any formal recognition for HRE or structure for its delivery, this again being a matter reliant on a commitment from teachers to address HRE.

Significant also is the absence, in the 1995 revision of the NC as a whole, of any re-write or up-dating of 'health' as a cross-curricular theme. Research needs to continue to monitor the position and expression of health issues in PE and it will be interesting to see what place it assumes in any future revision of the NC and NCPE.

The author's research findings may give rise to some feelings of disappointment. However, the research can be looked upon as a starting point for debate and development and, as Penney (1994) stated, there is certainly the potential for 'creative' interpretation, adaptation and contestation of the NCPE. PE teachers remain key figures in the policy process and, although they are undoubtedly acting in a context in which curriculum design is increasingly being driven by economic concerns, there is room for interpretation and some scope for adaption and resistance (see also Fullan, 1982 and Sparkes, 1991b). Penney (1994) found that a change in 'policy' may signal 'no change' in PE (p. 314) but she remained hopeful that PE teachers might recognise the potential to explore 'gaps' in the NCPE text. Similarly, it is hoped that the author's current and future work in the HRE area may assist PE teachers in recognising such potential and in supporting them in the design and delivery of innovative experiential HRPE programmes. However, such support undoubtedly needs to acknowledge the intrinsically complicated nature of educational change which, essentially 'depends on what teachers do and think - it's as simple and complex as that' (Fullan, 1982, p. 107). Indeed, Pate and Hohn (1994) rather optimistically state that 'although we may be striving to turn a profession that has the inertia of a supertanker, as individuals each of us is a speed boat that can turn on a dime' (p. 217).

Finally, since the rationale for retaining PE in the latter years of compulsory education relates to encouraging young people to develop a fit and healthy lifestyle (Dearing, 1993, p. 45), it is recommended that this objective be addressed sincerely by the profession. Expectations are that school PE educates children about exercise and activates young people (DoH, 1992, 1995; Sports Council & HEA, 1992). This demands that physical educators teach health issues rather than expecting them to happen as a natural consequence of participation in vigorous activity. Now that health issues are to be explicitly addressed in PE, there is a need to focus on helping teachers to develop and monitor HRE programmes which genuinely promote current and future activity levels through increased understanding, competence and confidence. It also suggests that HRE PoS should focus more on activity than fitness, more on participation and competence than performance and training, and more on developing informed and independent exercisers than a 'group of followers' (Mahoney, 1993, p. 23). This undoubtedly requires genuine commitment from the PE profession and appropriate and adequate support. Although currently there is only limited evidence

that quality HRPE programmes can positively influence children's health (see Chapter 2, Section 4, 2.5), what is clear is that past approaches to health issues within PE in England have been limited in their ability to promote 'active living'. Certainly, the teaching of HRE appears to be shifting from the superficial and piecemeal approaches of the past towards more structured, meaningful and effective approaches. Indeed, Cale (1996b) considers that the 'PE profession has much to be proud of and should be applauded for the commitment it has shown to HRE and for the progress it has made in the area, particularly in such a short period of time' (p. 12). However, there is clearly still some way to go towards school PE significantly contributing to public health. Unfortunately, PE programmes rarely feature a committed, comprehensive and coherent approach to health issues, and thus PE is not currently the 'picture of health' that it could or should be. Nevertheless, it is both desirable and possible to 'work towards a shared vision of physical education and health-related exercise' (SCAA, 1997, p. 26). Onto my next mission...

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