Curriculum Organisation and Classroom Practice in Primary Schools

A Discussion Paper

Curriculum Organisation and Classroom Practice in Primary Schools

A discussion paper

Robin Alexander
Professor of Primary Education, Leeds University

Jim Rose
Chief Inspector, Her Majesty's Inspectorate

Chris Woodhead
Chief Executive, National Curriculum Council

Department of Education and Science

Department of Education and Science
Sanctuary Buildings
Great Smith Street
London SW1P 3BT
Tel: 071-925 5000

Further copies can be obtained from:

Department of Education and Science
Publications Despatch Centre
Honeypot Lane
Stanmore
Middlesex HA7 1AZ
Tel: 081-952 2366 (*answerphone*)
Fax: 081-951 1013

First published 1992

Production by DES Information Branch
IB/1012/11/26

ISBN 0855 411 8

Contents

Summary

1 Introduction

This report 'reviews available evidence about the delivery of education in primary schools' in order 'to make recommendations about curriculum organisation, teaching methods and classroom practice appropriate for the successful implementation of the National Curriculum particularly in Key Stage 2'.

2 Standards of achievement in primary schools

The data on primary pupils' achievement are in many ways inadequate. It is, nevertheless, possible to identify some evidence of downward trends in important aspects of literacy and numeracy. At the same time, there have been improvements in the quality of teaching in, for example, science and information technology. Whatever else they do primary schools must accept overriding responsibility for teaching literacy and numeracy and ensure that those key areas of their work are taught effectively. (Paras 24 to 50)

3 The quality of teaching in primary classrooms

3.1 The task of the primary teacher has changed dramatically in recent years, particularly since the arrival of the National Curriculum. Primary teachers, especially in Key Stage 1, deserve credit for their commitment and skill in coping with these changes. (Para 57)

3.2 Over the last few decades the progress of primary pupils has been hampered by the influence of highly questionable dogmas which have led to excessively complex classroom practices and devalued the place of subjects in the curriculum. The resistance to subjects at the primary stage is no longer tenable. The subject is a necessary feature of the modern primary curriculum. It requires appropriate kinds of knowledge on the part of the teacher. However, the extent of subject knowledge required in order to teach the National Curriculum is more than can reasonably be expected of many class teachers, especially but not exclusively in the upper years of Key Stage 2. (Paras 62 to 64, 77 to 80)

3.3 Thorough planning, and careful attention to mapping progression and monitoring progress, are essential requirements for success, irrespective of the ways in which the curriculum is organised. There have been improvements here, particularly since the introduction of the National Curriculum, but the process needs to be further strengthened. (Paras 58 to 61)

3.4 There is clear evidence to show that much topic work has led to fragmentary and superficial teaching and learning. There is also ample evidence to show that teaching focused on single subjects benefits primary pupils. We see a need both for more sharply-focused and rigorously-planned topic work and for an increase in single subject teaching. (Paras 65 to 72)

3.5 The organisational strategies of whole class teaching, group work and individual teaching need to be used more selectively and flexibly. The criterion of choice must be fitness for purpose. In many schools the benefits of whole class teaching have been insufficiently exploited. (Paras 86 to 101)

3.6 Effective teaching, regardless of the strategy used, requires the teacher to deploy a range of techniques. It is particularly important that the potential of explaining and questioning is realised. (Paras 102 to 106)

3.7 Over-complex patterns of curriculum and classroom organisation frustrate diagnosis, assessment, task matching and pupil learning. (Paras 97, 109 to 110)

3.8 Standards of education in primary schools will not rise until all teachers expect more of their pupils. Assumptions about pupils' abilities should be treated as working hypotheses to be updated in the light of new evidence. (Paras 85, 107 to 110)

4 Subject expertise, teaching roles and staff deployment

4.1 The problem of shortage of subject expertise is now an acute one in primary education. Every primary school should, in principle, have direct access to specialist expertise in all nine National Curriculum subjects and in religious education. (Paras 140 to 141)

4.2 Primary teaching roles are currently too rigidly conceived and much greater flexibility in staff deployment is needed. We recommend the introduction of semi-specialist and specialist teaching to primary schools to strengthen the existing roles of class teacher and consultant. There is a particular case for concentrating specialist teaching at the upper end of Key Stage 2. (Paras 139 to 150)

4.3 Although the introduction of LMS has resulted in an increased administrative burden, the head's key responsibility remains that of providing curriculum leadership and monitoring the quality of teaching in order to raise standards of pupil learning. (Paras 151 to 163)

5 Initial training, induction and INSET

5.1 Decisions about the initial training of primary teachers should be made in the light of a clear understanding of the kinds of teachers which primary schools now need. The competencies required for the teaching role(s) in question can then be clearly specified and appropriate decisions taken about the form and location of training. The acute problem of overcrowding in primary initial training would be alleviated by a better articulation of the respective roles of ITT, induction and INSET. Schools have an obligation to help the new teacher extend the competencies acquired in initial training. (Paras 164 to 175)

5.2 The current priorities for initial training and induction should be the acquisition and strengthening of subject expertise and systematic training in a broad range of classroom organisational strategies and teaching techniques. (Paras 167 to 169)

5.3 INSET is currently too diffuse. Priorities should be clearly identified and pursued in sufficient depth to ensure that in-service training has a decisive impact on the quality of teaching and learning in primary schools. To avoid the risk of schools recycling their own inadequacies it is essential that every teacher has access to a mixed economy of school based and other forms of INSET. (Paras 178 to 183)

6. The National Curriculum

The National Curriculum Orders should be regularly reviewed to ensure that they make appropriate demands on pupils of different ages and abilities and, individually and collectively, are manageable in terms of the time, resources and professional expertise available in schools. (Paras 129 to 131)

1 Introduction

1 The Secretary of State has asked us 'to review available evidence about the delivery of education in primary schools' and 'to make recommendations about curriculum organisation, teaching methods and classroom practice appropriate for the successful implementation of the National Curriculum, particularly at Key Stage 2'. The statement made by the Secretary of State on 3 December 1991 stressed that 'questions about how to teach are not for Government to determine'. It emphasised his desire 'to initiate a discussion, not to impose solutions', and invited 'every primary headteacher and every primary classroom teacher to join in the radical rethinking now needed as to how best to teach children in our schools.' This report attempts both to respond to the remit and to provide a basis for the debate which the Secretary of State wishes to promote.

2 We have had neither the time nor the resources to invite new evidence, visit schools or commission research. Instead, we have concentrated on reviewing, as invited by the Secretary of State, existing evidence, particularly that pertaining to the issues of standards, classroom practice and the implementation of the National Curriculum, bringing to bear our knowledge of primary education. In this process we were able to gain access to the work of a number of research projects still in progress and HMI's considerable database. We are grateful to the researchers and HMI concerned for letting us see this material. We wish to thank the many individuals and organisations, who, unsolicited, wrote to us: we have taken account of their views.

3 There are two points we would like to emphasise. First, most people will be aware that the debate about standards and classroom practice is all too often conducted in terms of a simplistic dichotomy between 'traditional' and 'progressive', or 'formal' and 'informal'. The move to a more mature and balanced discussion of the issues is long overdue, and we hope that our report will contribute to this process.

4 Second, we want to make clear at the outset our position on the funding of primary education. There is, in our view, no justification for the fact that Year 6 pupils in primary schools are funded less generously than Year 7 pupils in secondary schools. This historical anomaly means that primary schools have insufficient scope to employ, for example, the degree of specialist expertise that is needed to achieve better quality subject teaching. We would stress, however, that many of the issues of curriculum organisation, class management and teacher expertise which lie at the heart of this report do not necessarily involve any increase in funding, and we hope, therefore, that our

readers can suspend their concern about overall levels of resourcing in order to consider the arguments and issues we present.

5 The report's structure is straightforward. After setting the scene we review the all-important questions of standards of achievement and the quality of classroom practice, before identifying various ways in which both can be improved. To maintain continuity in the discussion, the main sources of evidence are cited not in the text but in an appendix.

II Primary education in the 1990s: Background

6 It is important to understand that the system of primary education in England is, structurally and qualitatively, extremely diverse.

7 In January 1991 (the most recent date for which the figures are available), there were 3,782,108 primary aged pupils in England being taught by 163,686 full-time and 37,419 part-time teachers in 19,047 primary schools. Over half a million of the pupils were aged under five years.

8 These schools included infant (4/5–7), first (4/5–8/9), infant and junior (4/5–11), junior (7–11), first and middle combined (4/5–12), and middle deemed primary (8–12). In as far as it is the largest single category, containing well over half of the total, the junior/infant school is the primary 'norm'.

9 The smallest of these establishments had under ten pupils, the largest over eight hundred. About 17 per cent of primary schools, mainly in rural areas, had under ninety pupils, and the average primary school size for England as a whole was 199 pupils.

10 Nearly 80 per cent of the schools in 1990 were located in cities and large towns, including some 14 per cent in inner city areas. HMI estimate that two-thirds of the inner city schools (as compared with one third nationally) had significant proportions of disadvantaged pupils.

11 Primary class sizes showed considerable variation. In January 1990, three-quarters of the primary classes had one teacher and fewer than 30 pupils, and nearly a quarter had fewer than 20 pupils; but 17.5 per cent had over 31 pupils, and 1.3 per cent (or just under 2000 classes) had more than 36 pupils. Most classes were taught by one full-time class teacher, but a significant proportion of classes (10,000 or 7.4 per cent) were taught by two or more teachers, usually part time.

12 Although bald statistics like these help underline structural diversity as a salient feature in primary education, they convey little about those elements of classroom life upon which much of the recent publicity and criticism have centred. It is therefore important to emphasise that the variety is not only quantitative: there are also important differences in the ways schools go about their task of educating pupils.

13 For example, taking schools as a whole, the patterns of grouping and the organisation of learning change dramatically from the reception year to year 6: a curriculum centred on activities tends to give way to one centred on topics and subjects; there is an increase in whole-class

teaching as pupils become older; oral and practical work are given less emphasis and there are more sustained periods of reading and writing. Moreover, the manner in which the curriculum is structured and taught varies not just between years but also within them – across classes and schools. Thus pupils of the same age in different schools may experience a largely topic based curriculum, a subject based curriculum, or a combination of topics and subjects. Where topic work exists, it too (as we shall see later) can vary considerably in approach and scope. While nearly all teachers employ whole class teaching to some extent, some make much greater use of it than others. At a finer level of detail, teachers use the various techniques of questioning, instructing, telling and explaining in markedly different ways.

14 However, there are two kinds of diversity which are clearly unacceptable. The first is a degree of inconsistency in curriculum and classroom practice which militates against curriculum balance within a school year and/or curriculum progression and continuity as pupils move from one year or class to the next. The second is excessive variation in the quality of the education provided by different schools and teachers.

15 Although primary schools vary considerably in size, location and character, and although they are very different places from the nineteenth century elementary schools from which they are descended, they have preserved intact two major features of those earlier establishments. The first is a curriculum characterised by close attention to the 'basics' of reading, writing and number. The second is what was devised as the most 'cheap but efficient' means for delivering that curriculum, the class teacher system.

16 Each element in this legacy has avoided challenge for a remarkably long time. Yet in the context of the successful delivery of the National Curriculum, each now needs to be questioned. What, in the 1990s, is a balanced curriculum? What kinds of expertise are needed to plan and teach it? Can a generalist reasonably be expected to profess expertise across a curriculum of the scope and complexity of that now required by law at Key Stages 1 and 2?

17 'Primary' as a label first surfaced during the 1927 Hadow Committee's deliberations, and was confirmed in the 1931 Hadow Report which offered what was soon to become the first of many such slogans, that 'the curriculum is to be thought of in terms of activity and experience rather than knowledge to be acquired and facts to be stored'. The polarisation of curriculum and experience and the assumption that

knowledge is merely arid fact, became two of the least helpful guiding principles of a number of post-war primary schools. On the other hand, Hadow also provided the basic structure for primary education – a stage of schooling for 5–11 year olds, subdivided at 7 – which remains today.

18 The Plowden Report of 1967 set the seal of approval on the Hadow vision, and elaborated it into what it called a 'recognisable philosophy of primary education':

> A school is not merely a teaching shop, it must transmit values and attitudes. It is a community in which children learn to live first and foremost as children and not as future adults.... The school sets out... to devise the right environment for children, to allow them to be themselves and to develop in the way and at the pace appropriate to them. It tries to equalise opportunities and compensate for handicaps. It lays special stress on individual discovery, on first-hand experience and on opportunities for creative work. It insists that knowledge does not fall into neatly separate compartments and that work and play are not opposite but complementary.

19 In this paragraph are the seeds of the ideas and practices to which several generations of teachers have aspired. However, they did not necessarily deliver. The commonly held belief that primary schools, after 1967, were swept by a tide of progressivism is untrue. HMI in 1978, for example, reported that only 5 per cent of classrooms exhibited wholeheartedly 'exploratory' characteristics and that didactic teaching was still practised in three-quarters of them.

20 The reality, then, was rather more complex. The ideas and practices connoted by words like 'progressive' and 'informal' had a profound impact in certain schools and LEAs. Elsewhere they were either ignored, or – most damagingly in our view – adopted as so much rhetoric to sustain practice which in visual terms might look attractive and busy but which lacked any serious educational rationale. Here they lost their early intellectual excitement and became little more than a passport to professional approval and advancement. The real problem was not so much radical transformation as mediocrity.

21 This was predicted by Alec Clegg, an influential figure in post-war primary education, in 1974:

What will educational historians say about the transformation of our primary schools since the last war? They will no doubt write about open education, vertical grouping, activity methods, free choice and other clichés which were the verbal shorthand of those who started it all and knew what they were doing, but which more recently have become the jargon of those who have jumped on the bandwagon but cannot play the instruments.

22 It is fashionable to blame the Plowden Report for what are perceived as the current ills of primary education. However, if ill-conceived practices have been justified by reference to Plowden, this reflects far more damagingly on those who have used the report in this way than on Plowden itself. If 'Plowdenism' has become an ideology to which thousands of teachers have unthinkingly subscribed, then it is necessary to ask why the teachers concerned have stopped thinking for themselves and have apparently become so amenable to indoctrination. If things have gone wrong – and the word 'if' is important – then scapegoating is not the answer. All those responsible for administering and delivering our system of primary education need to look carefully at the part they may have played.

23 We see the need to encourage a new kind of debate about primary education, but we also wish to distance ourselves as firmly from mindless iconoclasm as from mindless orthodoxy. There has to be – and there is – a better way.

III Standards of achievement in primary schools

24 Concerns about educational standards are expressed at two levels. There are particular worries about whether standards of literacy and numeracy have fallen in recent years; and there are wider concerns about whether the standards achieved by primary school pupils constitute an adequate preparation for the demands of life in modern society.

25 On both levels it is clear that, to function effectively in the 21st century, our children will need higher standards of literacy and numeracy than ever before. This judgement is, of course, independent of the vexed question of whether standards are rising or falling. We attempt below to come to as definitive a judgement on this issue as the evidence allows, though we have to say that there are insufficient statistical data on primary pupil performance over time. A number of preliminary points, however, need to be made.

26 First, we have highlighted concerns about literacy and numeracy because these are the key skills upon which so much learning depends. But it is important to recognise that there are other curricular objectives which need to be reviewed in an analysis of pupil achievement. For example, there have been considerable gains in the teaching of information technology in recent years and it is significant that HMI report improvements in the standards of work in science in Year 1 during the first year of the implementation of the National Curriculum. Prior to the National Curriculum, science was neglected in very many schools and the positive developments which HMI have described in both these areas need to be registered in the debate about standards. Neither should a proper concern for literacy and numeracy cause us to forget that HMI also report generally high standards of behaviour in primary schools. Parents and employers alike continue to place considerable emphasis on the development of values and socially responsible attitudes, and this is an area where the vast majority of primary schools are markedly successful.

27 Second, we need to comment on the concern being expressed by some schools that the time available for teaching the skills of literacy and numeracy has come under pressure from the introduction of the National Curriculum and the new assessment arrangements. If there is less time then it is obvious, so the argument goes, that standards will be threatened. This is a serious issue which needs to be confronted.

28 It is evident that primary schools have undergone a period of considerable disturbance over the last three years. Much of this disturbance has impacted on Key Stage 1 classes as teachers have had to undertake training and preparation, for example, for the new assessment

arrangements. How far such interruptions to the pattern of work have affected standards of literacy and numeracy is difficult to say. Head-teachers' views should be taken seriously on this matter and they have certainly registered concerns about the turbulence caused to school timetables. It is important, therefore, to keep the position in each school under review to ensure that disturbance to the teaching timetable is kept to a minimum.

29 Since many teachers have found it very hard to adapt their current practice to the new requirements, the manageability of the National Curriculum must be kept under review. It may be that the difficulties are in part transitional and may ease as teachers become more familiar with the statutory Orders. Moreover, it is unwise to proceed as if a simple dichotomy existed between teaching the subjects of the National Curriculum on the one hand and teaching the skills of literacy and numeracy on the other. Some primary schools have demonstrated, there are rich possibilities for teaching literacy and numeracy within subjects such as science, history and geography. It is also unwise to assume that more time automatically means higher standards. Research evidence shows that pupils often spend less time on task in sessions devoted to language work and number than in most other work. What counts is the quality of the teaching and learning that is achieved in the time available and how well that time is managed. We believe that it is premature to blame the National Curriculum itself for time pressures, much less for lack of attention to literacy and numeracy or for a decline in standards. We support, however, the case for a review of the National Curriculum as currently constituted.

30 The main sources of information about standards of pupil achievement in primary schools upon which we have drawn are:

i data collected by the Assessment of Performance Unit (APU);

ii LEA data;

iii data collected by the National Foundation for Education Research (NFER);

iv results of the National Curriculum assessment of seven year olds;

v HMI reports;

vi international comparisons.

31 The APU was set up in 1975 to promote the development of methods of assessing and monitoring the achievement of children at school and to seek to identify the incidence of underachievement. Between 1978 and 1984 the APU undertook the first phase of annual surveys of pupils aged 10 and 11. Five such annual surveys were carried out separately in English, mathematics and science, involving some 2 per cent of the age group in each subject each year. A second phase of APU testing took place five years later for mathematics (1987) and for English (1988). The proposed 1989 science survey was abandoned. Practical as well as pencil and paper tests were devised by the APU teams specifically for the purpose of national monitoring. There are no APU data on the achievements of seven year olds.

32 During the first phase of testing only slight changes in pupil performance in England were identified over the five year period. Such trends as were revealed were upwards rather than downwards – in mathematics overall, in reading and, for boys, in writing. In science, while there were some variations in performance across the five surveys, there was no clear evidence of a rise or fall in standards.

33 In the 1988 APU English assessments pupils showed some slight improvement in their performance in reading 'for information' while their reading of a story showed no change, as compared with the 1983 findings. There was also very little change overall in pupils' writing performance although there was a slight deterioration in the outcomes on one of the tests.

34 Findings from the second phase of mathematics testing showed that pupil performance in some aspects had improved over the five year period while others had declined. Improvements were made in geometry, measures, probability and statistics while deterioration, to a rather greater extent, had occurred in nearly all the number categories, with the largest decline in decimals and fractions.

35 In summary, over the period of ten years of APU testing, the major conclusion for English and mathematics is that, though standards remained much the same in most aspects of these two core subjects, there was some improvement in reading but there was also a worrying deterioration in important aspects of numeracy.

36 In the autumn of 1990 the Secretary of State asked the School Examinations and Assessment Council (SEAC) to survey the evidence on reading standards of seven year olds held by LEAs. The survey, conducted by the NFER, received information from 95 out of the 116

LEAs in England and Wales. Of the 26 LEAs in which 'the data enabled a judgement to be made' a decline in standards was evident in 19, three LEAs reported a rise, in three the findings indicated no change and in one 'fluctuations made it impossible to determine a pattern'. Of the nineteen LEAs in which a decline was reported this mainly occurred in the latter part of the 1980s. In some cases this decline offset a slight increase in the earlier part of the decade. Our rough estimate is that the decline amounted on average to about two points of standardised score in the nineteen LEAs. The report concluded that 'the data do not exist from this survey, which would enable any judgement to be made as to the national picture concerning standards of children's reading around the age of seven'.

37 As we write, however, a report is being finalised by the NFER on a survey undertaken to compare the performance of seven to eight year olds (Year 3) on a reading test taken in 1991 with that of a similar group of pupils who had taken the test in 1987. Preliminary analysis suggests that there was a statistically significant fall of 2.5 standard points (from 100 to 97.5) in average reading scores between 1987 and 1991, roughly equivalent to a decline of three to five months in reading age.

38 Results from the first administration of National Curriculum assessments (1991) indicate that approximately two thirds of Year 2 pupils attained level 2 in the core subjects (English 61 per cent, mathematics 66 per cent, science 67 per cent). Significant differences among these subjects, however, occurred in the proportions of pupils attaining levels 1 and 3.

39 The English results (with 17 per cent at level 3) were broadly as expected. The results for reading revealed a smaller proportion at levels 2 and 3 (71 per cent) than for English overall (78 per cent). This may in part relate to the more demanding requirements which had to be fulfilled in order to achieve success on the attainment target for reading.

40 The results in the mathematics attainment targets and in the subject overall (6 per cent at level 3) were generally lower than in English. Pupils in general did less well than expected in Number Operations (attainment target 3) where 44 per cent had not yet reached level 2. In some of the attainment targets covering space, shape and data handling, more pupils might have been expected to achieve level 2 or better.

41 In science some 22 per cent of pupils achieved level 3: many more than expected. This was mainly because performances were much higher

on the attainment target for the exploration of science (attainment target 1) than for other attainment targets. For example, on the knowledge and understanding component only 5 per cent reached level 3.

42 In general, the distributions of pupils by level for both the mathematics and the science attainment targets were very uneven.

43 The 1991 National Curriculum assessment results have to be interpreted with great caution since the assessment procedures, including the administration of the standard assessment tasks, were still at a fairly early stage of development. They involved some 43,000 Year 2 teachers making National Curriculum assessments for the first time. Factors such as problems in the interpretation of National Curriculum statements of attainment, the variable quality and amount of in-service training, local variations in terms of resources, including staff time, and the very time consuming nature of the requirements, all exacerbated the difficulties experienced by teachers in introducing the new procedures. In future years many of these problems should diminish as the arrangements are simplified and teachers become more confident in making their assessments. Since this is the first run of National Curriculum assessments we have no base line to determine whether there have been changes in standards of pupils' performance over time. In future years such comparisons will become possible.

44 HMI visit over 3,000, or about one in six, primary schools each year. Over the last three years the Annual Reports of the Senior Chief Inspector, while detecting no general rise or fall in educational standards, point to some long-standing weaknesses in classroom practice and conclude that standards are not as good as they must be if the existing and future needs of individuals and the nation at large are to be met. HMI frequently draw attention to disturbingly wide variations in standards of pupil achievement between schools serving broadly similar catchment areas and between similar classes in the same school. Whatever may be happening to standards of performance over time, we believe the scale of differences revealed by HMI is unacceptable. Some schools and some teachers will, of course, always be more effective than others. But the wide variation in standards in our primary schools points to some obstinate barriers to pupils' progress that will have to be removed if standards are to be raised.

45 HMI inspections over the last two years show that standards in Key Stage 1 are generally better than in Key Stage 2. This is the result of a better match of work to ability in Key Stage 1 than in Key Stage 2,

particularly for the more able pupils, and adds force to the view that many class teachers, especially in Years 5 and 6, have difficulty covering the whole curriculum in sufficient depth.

46 The 1990 HMI report on reading pointed to strong links between the progress made by the pupils, the organisation and management of the class, the methods used and the knowledge and skill of the teacher. In other words, it was within-school rather than external factors that accounted for much of the difference between good and poor progress. We discuss some of these school factors below.

47 International comparisons from studies such as the International Association for the Evaluation of Educational Achievement (IEA) and the more recent International Assessment of Educational Progress (IAEP) have mainly focused on secondary age pupils. Information on the primary stage is limited to mathematics and science. Results from IEA surveys conducted in the early 1980s at age 10+ and 14+ in science and 13+ in mathematics showed pupils from England scoring overall slightly below average for the countries taking part. Results from the IAEP at 13+ showed similar results, though in the science study pupils from the UK scored above average. More detailed analysis of these results provides some evidence of strengths and weaknesses: thus pupils in the UK scored poorly on 'numbers and operations', but highly on 'logic and problem solving' in the IAEP mathematics assessment.

48 There are reasonable grounds for scepticism about such international comparisons, given the difficulty of ensuring that like is compared with like. This applies even more to trends, where results in the case of the IEA are 15-20 years apart. However, we can conclude tentatively that pupils in England have, in general, not done well in these studies. Moreover, this is not a new development, but was also evident in studies conducted in the 1960s/70s. There is also some evidence that the relative position of pupils in England declined slightly between the two sets of IEA studies. The most recent IAEP studies repeat these general findings.

49 Part of the reason for our relatively poor performance overall in such international assessments is an extended tail of distribution which pulls the average down. This is no new feature, but was also found in the IEA studies of the 1960s and 1970s. Thus, in the 1980 IEA science study at 10+, 61 per cent of the schools in the English sample had an average score less than that achieved by the lowest scoring school in Japan (the country with the highest overall score).

50 **Conclusion**

Despite the uneveness and gaps in the national and international data on standards, the various sources discussed in this section provide some evidence of downward trends in important aspects of literacy and numeracy. It also suggests that these trends may affect some ability groups and pupils from particular backgrounds more than others. Whatever else they do primary schools must get their policies and practices right for teaching the basic skills of literacy and numeracy. These findings add urgency to the need to confront the questions about classroom practice which we discuss in the next section of this report.

IV The quality of teaching in primary classrooms

The focus of classroom research and enquiry

51 This section of the report is based on a review of the available research evidence about teaching and learning in primary schools in England, as it has accumulated over the past twenty years. The three main strands to this evidence are summarised below in order to define the context in which our discussion is set.

52 The first, and longest established, focus of enquiry is the empirical study of how primary pupils develop and learn. To teach well, teachers must take account of how children learn. We do not, however, believe that it is possible to construct a model of primary education from evidence about children's development alone: the nature of the curriculum followed by the pupil and the range of teaching strategies employed by the teacher are also of critical importance. Teaching is not applied child development. It is a weakness of the child-centred tradition that it has sometimes tended to treat it as such and, consequently, to neglect the study of classroom practice.

53 Recent research into children's learning does, however, emphasise young children's immense cognitive and linguistic competence. In the 60s and 70s, Piagetian theories about developmental ages and stages led to chronologically fixed notions of 'readiness', thus depressing expectations and discouraging teacher intervention. More recent studies demonstrate what children, given effective teaching, can achieve and, in particular, the young child's capacity to understand the structure of subjects. They show that learning is essentially a social and interactive process. They place proper emphasis on the teacher as teacher rather than 'facilitator'. Such insights are, in our view, critical to the raising of standards in primary classrooms, and we build upon them in later sections of the report.

54 The second research strand focuses on social factors in educational achievement. This research highlights both the destabilising impact on young children of adverse home circumstances and the potency of stability and support. While there was a time when home circumstances were offered as a convenient explanation for virtually any difficulty which a pupil might experience in the classroom, thus absolving teacher and school of any responsibility, there is now a much more balanced and realistic understanding of the relative impact of home and school.

55 Up to a point, the socially advantaged child can compensate for school inadequacy. The disadvantaged child is doubly disadvantaged by the weak school. Schools can and do make a difference, and, given the broad estimate that two thirds of pupils in inner city schools are disadvantaged, it is vitally important that all schools have the highest expectations of all their pupils.

56 The third strand of evidence, which includes both the work of HMI and research studies, shows how different professional practices affect the quality of pupil learning. HMI has reported extensively on issues of school management, curriculum planning, progression, and many aspects of classroom practice. Research studies have on the one hand helped clarify the ideas which shape classroom practice and, on the other, have generated a very considerable body of empirical data about the effectiveness of particular teaching methods. These data are highly significant in that the conclusions for differently-focused research studies are broadly complementary.

The changing task of the primary teacher

57 One obvious point which emerges from this material is that the task of the primary teacher has changed significantly with the advent of the National Curriculum. Year 1 and 2 teachers, in particular, have invested enormous time and energy in coming to terms with the new statutory requirements, and, as a consequence, a very great deal has been achieved in the last two years. As we write, primary schools are teaching the statutory Orders for six of the nine National Curriculum subjects, will shortly be planning for the introduction of the remaining three, and are preparing for the second full run of Key Stage 1 assessment. Inevitably, the initial effort has been to master the demands of the statutory Orders. The time is now right to examine the appropriateness of existing models of curriculum organisation, teaching methodology and staff deployment in the light of the National Curriculum requirements.

The importance of planning

58 Curriculum planning is one aspect of primary teaching which, traditionally problematic, is now improving significantly. HMI have, from

the late 1970's onwards, identified weaknesses in planning at the level of both school and classroom. Much school planning in areas other than mathematics and reading (where published schemes provided a not always appropriate prop) amounted to little more than an attempt to list the content to be covered. As a result, continuity and progression in the arts and humanities were often suspect. HMI report that one of the first visible improvements in primary schools has been curriculum planning in relation to the National Curriculum core subjects. With the introduction of the National Curriculum and the School Development Plan initiative, there has been a recognition that teachers must plan together to ensure consistency and progression across classes and year groups and that formally structured short and long-term planning are essential to effective classroom teaching.

59 The National Curriculum has introduced a similar discipline into planning at classroom level. In the past, too many teachers have argued that rigorous and comprehensive planning militates against the need for spontaneity and flexibility. In fact, the two are perfectly compatible. With the introduction of the National Curriculum, this dichotomy is now simply untenable.

60 We wish to emphasise that planning is taking far more time than in the past. This may be a relatively short-term phenomenon as teachers become familiar with the demands of the Statutory Orders, but the situation must be monitored over the next few years as part of an overall drive to ensure that the National Curriculum provides a manageable framework for primary education. We also believe that schools need to monitor their use of non-contact time within the statutory 1,265 hours. There is evidence to suggest that headteachers and senior staff can take a disproportionate amount of the limited non-contact time available. All teachers need time to plan and prepare their work. There are strong arguments for a more equitable distribution of such non-contact time as exists.

61 We recognise, looking to the future, that further developments in the quality of curriculum planning depend upon the management of whole school planning across all National Curriculum subjects and both key stages. In some schools collective planning at Key Stage 2 has yet to move beyond the core subjects. It will also be necessary to consider how school and classroom planning can be effectively related, and, in particular, whether the new subject requirements can be reconciled with the established commitment to cross-curricular planning through such devices as 'topic webs'.

Curriculum structure and organisation: subjects or topics?

62 The vast majority of primary schools organise the curriculum in terms of subjects and topic work. A topic is generally understood to be a mode of curriculum organisation, frequently enquiry based, which brings elements of different subjects together under a common theme. A small minority of schools organise the whole of the curriculum in terms of separate subjects; virtually no primary school works solely through topics. HMI report that about 30 per cent of work in primary schools is taught as single subjects. Music, physical education, most mathematics and some English are usually taught as separate subjects. The other foundation subjects are very often taught, entirely or largely, as aspects of topic work.

63 Despite these demonstrable facts, the rhetoric of primary education has for a long time been hostile to the idea that young children should be exposed to subjects. Subject divisions, it is argued, are inconsistent with the child's view of the world. Children must be allowed to construct their own meanings and subject teaching involves the imposition of a received version of knowledge. And, moreover, it is the wholeness of the curriculum which is important rather than the distinct identity of the individual subjects.

64 Each of these familiar assertions needs to be contested. First, to resist subjects on the grounds that they are inconsistent with children's views of the world is to confine them within their existing modes of thought and deny them access to some of the most powerful tools for making sense of the world which human beings have ever devised. Second, while it is self evident that every individual, to an extent, constructs his/her own meanings, education is an encounter between these personal understandings and the public knowledge embodied in our cultural traditions. The teacher's key responsibility is to mediate such encounters so that the child's understanding is enriched. And, finally, the integrity of the curriculum as a whole is hardly likely to be achieved by sacrificing the integrity of its constituent parts.

65 In evaluating these arguments it is helpful to draw a distinction between integration, which entails bringing together subjects with distinct identities, and non-differentiation, which does not concede that such distinctiveness is acceptable. Teachers (often of younger pupils) who prefer to view the curriculum in terms of broad areas such as language, investigation and creative work are particularly committed to this second view.

66 We consider that a National Curriculum conceived in terms of distinct subjects makes it impossible to defend a non-differentiated curriculum. This does not mean that all the National Curriculum subjects must necessarily be taught separately: curriculum conception and modes of curriculum organisation must not be confused. But, whatever the mode of organisation, pupils must be able to grasp the particular principles and procedures of each subject, and, what is equally important, they must be able to progress from one level of knowledge, understanding and skill to another within the subject.

67 If it can be shown that the topic approach allows the pupil both to make acceptable progress within the different subjects of the National Curriculum and to explore the relationships between them, then the case for such an approach is strong on both pedagogic and logistical grounds. If, however, the result is that the differences between subjects are extinguished, then the strategy is indefensible.

68 There is no doubt that much topic work has been and still is very undemanding, particularly in history and geography. Too many topics amount to little more than aimless and superficial copying from books and offer pupils negligible opportunities for progression from one year to the next. Art is too often limited to the level of picture making to illustrate topic writing. Much pupil time can be wasted on so-called 'collaborative' projects. These are serious weaknesses in classroom practice.

69 Many schools have yet, moreover, to make full use of the National Curriculum programmes of study in planning topics. Some do not have clear, well documented schemes of work covering both key stages and detailing the subject content, knowledge and skills. Others do not provide appropriately differentiated work which caters for a full range of ability. The intrinsic complexity of topic work means that problems will remain until rigorous planning becomes the norm. Subject coherence can be lost in the attempt to subsume too much into the grand theme; key attainment targets may be given only cursory attention; monitoring and assessment can remain weak.

70 This is not to deny that the topic approach can, in skilled hands, produce work of high quality. There is evidence to suggest that some schools, recognising the problems outlined above, are planning carefully structured topic frameworks for Years 1 to 6 which map the attainment targets and programmes of study of the subjects involved. In particular, there are signs of a move away from 'divergent' topics (where pupils have considerable freedom to follow their own interests

in response to a common starting point such as a visit or a book read to the class) to either 'broad-based' topics (where a theme like 'transport' is used to bring together content and skills from several subjects) or 'subject-focused' topics (where pupils concentrate upon a limited number of attainment targets from one particular subject but may also study relevant material from other subjects). In that it can be planned more easily in relation to the Statutory Orders and can provide more appropriately for the sequential development of pupils' knowledge, understanding and skills, the subject-focused topic, in particular, offers an efficient way forward.

71 These are positive developments. The introduction of the National Curriculum means, however, that a substantial amount of separate subject teaching will be necessary if every aspect of each programme of study is to be covered effectively. This is particularly the case at Key Stage 2, but some Key Stage 1 teachers will need to move towards a greater amount of subject teaching than usually exists.

72 Such a move need not necessarily result in the highly fragmented, incoherent curriculum which is feared by exponents of the topic approach. Topic work, when planned and executed poorly, can be even more fragmentary. We must emphasise, however, that good subject teaching depends upon the teachers' knowledge, skills and understanding in the subject concerned. Mathematics, for example, has been consistently taught as a separate subject, has been, for the most part, supported by commercially produced teaching materials, and has received generous funding and INSET support. Yet criticisms of primary mathematics voiced in the 1970s persist into the 1990s. Standards will be raised only when the requirements of each subject are dealt with clearly and systematically.

Curriculum breadth, balance and consistency

73 Whatever the mode of curriculum organisation, the breadth, balance and consistency of the curriculum experienced by pupils must be of central concern.

74 There is considerable evidence that prior to the introduction of the National Curriculum there were significant and unacceptable variations in the curriculum provided between and even within schools.

While all schools devoted considerable amounts of time to English and mathematics, some neglected important aspects of these subjects such as reading extension, oral work and mathematical problem solving. Others failed, moreover, to devote adequate attention to history, geography, art and music. The National Curriculum was introduced, in part, to ensure that all children have access to a broad and balanced curriculum that is consistent country-wide.

75 Concerns are now being expressed over the pressure which the core subjects are perceived to be exerting on the time available to teach other curriculum areas. And some aspects of the core subjects themselves, notably reading, appear to be squeezed as teachers concentrate their attention on hitherto less familiar attainment targets. These may be transitional problems inevitable in a period of radical curriculum change. But the structure of the National Curriculum as a whole and the weight of detail in individual subjects will need to be kept under careful review so that we can be confident that the curriculum experienced by pupils is appropriately broad and balanced, but, nonetheless, rigorous.

76 It is also important to learn lessons from empirical research which predates the National Curriculum. This research tells us that:

i Curriculum balance is not merely a matter of time. More fundamentally, it is about quality. The principle of curriculum entitlement means that subjects must be taught equally well whatever the amount of time devoted to them. Too often in the past those subjects most at risk in an overcrowded curriculum (the non-core foundation subjects and those not required by law) may also have been the very subjects which received least attention from national initiatives, LEA support and INSET, and from school curriculum review, development and resourcing. This imbalance in support needs to be addressed.

ii Some teachers are much less efficient than others in their use of the time which is allocated to the core subjects. Pupils are more likely, that is, to spend a higher proportion of time off task in the reading and writing tasks which dominate mathematics and English than when engaged in other activities. In short, the time devoted to these subjects by such teachers is not well used.

iii To think about curriculum balance solely in terms of subject time allocations, however, is to neglect another and possibly more fundamental way in which the curriculum impacts upon the child.

Classroom research, for example, has identified 'generic activities' (such as reading, writing, using apparatus, talking with the teacher and collaborating with other children) which pupils encounter daily regardless of subject labels. The balance which is struck amongst such activities is arguably as important as the balance which is struck amongst subjects.

The problem of curricular expertise

77 We use the phrase 'curricular expertise' to mean the subject knowledge, the understanding of how children learn, and the skills needed to teach subjects successfully. Effective teaching depends upon the successful combination of these understandings and skills. Opinion is divided about the relative importance of the teacher's subject knowledge, but few now dispute that it is important. Our own view is that subject knowledge is a critical factor at every point in the teaching process: in planning, assessing and diagnosing, task setting, questioning, explaining and giving feedback. The key question to be answered is whether the class teacher system makes impossible demands on the subject knowledge of the generalist primary teacher. We believe that it does.

78 The introduction of the National Curriculum with its statutory demands has brought the question sharply into focus, but HMI reports since the seventies point to the close relationship which exists between the knowledge of the subject which the teacher possesses and the quality of his/her teaching. The idea of the curriculum co-ordinator was developed to try to ensure that a school could make maximum use of the collective subject strength of its staff. The idea was subsequently built into initial training courses through the Secretary of State's 1984 and 1989 accreditation criteria.

79 In principle, the curriculum coordinator ought, in the larger school at least, to be able to sustain the work of the generalist teacher. In practice, while coordinators have often had a significant impact upon both whole school curriculum planning and the management of resources, in many schools they have had little real influence on the competence of individual teachers and the quality of classroom teaching and learning. There is, moreover, the problem of the small school, where it is unreasonable to expect that two or three teachers can be expert in ten subjects to the depth now required.

80 While, therefore, recognising that the curriculum coordinator is a partial solution to the problem we believe that other strategies must be considered. We examine these strategies in Section 7.

Mixed and single age-group classes

81 The proportion of schools with mixed age-group classes has increased from 50 to 70 per cent in the past decade. For some schools this form of grouping is a matter of choice. For most it is not, and in all schools of less than one form entry how to organise the pupils for teaching purposes is a perennial problem.

82 Teachers adopt a variety of strategies for coping in such circumstances. Some seek to individualise the tasks they set. Some use whole class teaching but try to provide open-ended activities which ostensibly allow pupils to find their own level. Some group by age, others by ability.

83 There are schools where vertical grouping has been adopted on educational grounds, but most teachers confess to finding teaching in such classes harder than in classes where pupils are relatively close in age and ability. HMI evidence suggests, too, that the considerable ability spread inevitable in the mixed age class leads to poor match of task to pupil in a third of the classes and a general failure to challenge the most able pupils. Planning, monitoring and assessment are particularly demanding in these circumstances. These constraints must, we believe, be acknowledged as a factor to be considered whenever the viability of small schools is discussed.

Streaming

84 Streamed classes were common at the upper end of the primary age range during the era of the 11+. Since then, they have more or less been phased out.

85 Research into the effect of streaming on pupils undertaken in the 1960's showed that streaming could benefit the achievement of some pupils, notably the most able, but that there could be a significant and negative impact on the self-image of those pupils who, placed in lower

streams, came to see themselves as failures. But the fundamental problem with streaming is that it is a crude device which cannot do justice to the different abilities a pupil may show in different subjects and contexts. For this reason, grouping according to ability is a more flexible device in that it allows the teacher to place a pupil in a particular ability group for a particular purpose. We believe that this is a sensible strategy. The mounting evidence about teacher under- expectation and pupil under-achievement means, however, that teachers must avoid the pitfall of assuming that pupils' ability is fixed. Assumptions about pupils' ability should be no more than working hypotheses to be modified as and when new evidence emerges.

Organisational strategies and teaching techniques

86 The substantial body of research which now exists about primary school teaching methods endorses what commonsense would expect: that the debate about the relative effectiveness of traditional and progressive methods ignores the fact that different organisational strategies and teaching techniques are needed for different purposes. Teachers need to evaluate the strengths and weaknesses of different approaches in order to make informed choices and, when necessary, should be prepared to learn new skills in the interests of effective teaching and learning.

87 We use the term 'organisational strategies' to describe the different ways in which the teacher can structure his/her class. There are three basic possibilities. Each pupil can be taught as an individual. The class can be taught as a whole. The class can be organised into groups. These strategies are, in practice, not mutually exclusive. Many teachers use all three.

Individual teaching

88 Given the self-evident fact that every child is different, individual teaching is an understandable aspiration. Indeed there are times when individual pupils will need particular help from one teacher. Pupils, for example, with learning difficulties will need one-to-one teaching for some of the time. However, it must also be said that

children have much in common, and that, in practice, the effort to teach every pupil in the class as an individual is fraught with difficulties. In such circumstances, the evidence shows that however skilled and energetic the teacher, each individual pupil receives a minute proportion of the teacher's attention. The interaction between teacher and pupil is likely to be as superficial as it is brief and infrequent. Pupils, deprived of the attention from either the teacher or other pupils which will maintain their motivation and challenge their thinking, work only intermittently. Not surprisingly, research studies show relatively low gains in pupil understanding in classrooms where teachers structure the day largely in terms of individual teaching. Teachers should not be tempted by approaches to teaching, which, when taken to extremes, can result in low level individual tasks and fleeting and superficial teacher/pupil interaction.

Whole class teaching

89 Whole class teaching appears to provide the order, control, purpose and concentration which many critics believe are lacking in modern primary classrooms.

90 To a significant extent, the evidence supports this view of whole class teaching. Whole class teaching is associated with higher-order questioning, explanations and statements, and these in turn correlate with higher levels of pupil performance. Teachers with a substantial commitment to whole class teaching appear, moreover, to be particularly effective in teaching the basic subjects.

91 The potential weaknesses of whole class teaching need, however, to be acknowledged. There is a tendency for the teaching to be pitched too much towards the middle of the ability range, and thus to risk losing the less able and boring the brightest. Observational studies show that pupils pay attention and remain on task when being taught as a class, but may, in fact, slow down their rate of working to meet the teacher's norm, thus narrowing the challenge of what is taught to an extent which advocates of whole class teaching might well find uncomfortable.

92 Despite these potential weaknesses whole class teaching is an essential teaching skill, which all primary school teachers should be able to deploy as appropriate. Provided that the teacher has a firm grasp of the subject matter to be taught and the skills to involve the class, pupils' thinking can be advanced very effectively.

Group work

93 The practice of organising the class into groups is common in all schools and inevitable in small ones. Teachers group pupils in various ways – by comparable ability, by mixed ability, by friendship, by gender, and randomly. Some use groups for some of the time; others for all of the time. Some maintain the same groupings; others vary the group according to the task or subject.

94 There will be times when grouping pupils by ability is the most appropriate way of teaching a particular aspect or subject. To be effective, such grouping depends on organisational skills which we discuss later, and, critically, on efficient and flexible assessment procedures. The question then arises of whether ability groups should be formed irrespective of the pupil's age. We see no reason for rejecting this strategy, providing teachers are sensitive to the fact that the self esteem of lower ability pupils could be affected adversely. It is also important to recognise that wide differences in levels of maturity might pose problems.

95 Grouping pupils within the class enables resources to be shared; fosters the social development which primary schools rightly believe to be an essential part of their task; and, above all, provides for pupils to interact with each other and their teacher.

96 The fact, however, that pupils are seated in groups does not necessarily mean that they are working as a group. All too often there may be a mismatch between the collaborative setting of the group and the individual learning tasks which are given to pupils. The result is that the setting may distract pupils from their work. Since, moreover, pupils need to learn the skills and develop the attitudes upon which successful collaborative work depends, it can never be assumed that it is enough to divide the class up, announce the activity, and leave individuals within the group to interact purposefully. Effective group work depends upon careful preparation and meticulous management.

97 Group work may quickly become counterproductive if teachers try to manage too many groups of pupils within the same class and/or have pupils working on too many different activities or subjects simultaneously. This practice places considerable demands on the teacher's skills of organisation and assessment and often results in a mode of working which contributes little to pupil learning but much to teacher exhaustion. If group work is to be employed each teaching session should, therefore, focus on a manageable number of groups and learning activities.

98 Teachers also need to be very careful in their investment of time between groups. Proper planning and careful monitoring of what actually happens in the classroom can ensure that the teacher works purposefully with each group, and, over a period of time, that a balance is struck between different areas of the curriculum. If time is not monitored in this way subjects deemed to be of low priority and pupils who seem capable of working with little teacher intervention may both be neglected.

Striking the balance

99 The conclusion we draw from the above analysis is that teachers need the skills and judgement to be able to select and apply whichever organisational strategy – class, group and individual – is appropriate to the task in hand. The judgement, it must be stressed, should be educational and organisational, rather than, as it so often is, doctrinal.

100 There are, of course, many primary teachers who use just such a mix of modes and there is some evidence to suggest that the proportion of whole class teaching has increased since the arrival of the National Curriculum. One recent research study shows teachers spending about a third of their time on whole class teaching, and another, which incorporates a national classroom sample, shows an almost exact three way balance between individual, group and whole class teaching. Bearing in mind that both studies relate to the infant stage, within which the tradition of individual and group work is strongest, it may well be that the proportion of whole class teaching is already, without any external pressure, higher at Key Stage 2.

101 But the issue is not one of mathematical proportion. The critical notion is that of fitness for purpose. The teacher must be clear about the goals of learning before deciding on methods of organisation. Whole class teaching, group work and one-to-one teaching are each particularly suited to certain conditions and objectives. Equally, they can be used in singularly inappropriate ways.

Teaching techniques

102 By 'teaching techniques' we mean the different methods a teacher can use to work with his/her pupils to promote their learning.

103 We endorse the common-sense view that teachers need to be competent in a range of techniques in order to achieve different learning outcomes. They need, for example, to be able to give precise instructions, to explain ideas clearly, to demonstrate practical activities, to pose different kinds of questions, and to help pupils understand how well they have done.

104 The importance of this range of techniques needs emphasising for three reasons. First, there is a persistent and damaging belief that pupils should never be told things, only asked questions. We believe that there are many circumstances in which it is more appropriate to tell than to ask, and we want, therefore, to underline how important it is for teachers to be able to explain ideas to their pupils. Pupils, for obvious reasons, value coherent and sensitive explanations very highly. Second, there is also a belief that teachers must never point out when a pupil is wrong. Proffer anything but unqualified praise, the argument goes, and the child's confidence will be undermined forever. There is no reason, in fact, why constructive critical feedback and encouragement should be regarded as incompatible. Finally, we think that these basic teaching techniques have been underrated in many schools and neglected in some primary initial training courses. The tendency has been to promote indirect teaching methods where, for example, pupils work on their own with books and work cards. The balance between direct and indirect teaching needs to be reviewed.

105 We say this because the research evidence demonstrates very clearly that the level of cognitive challenge provided by the teacher is a significant factor in performance. One way of providing challenge is to set pupils demanding tasks. But, equally, it is important for teachers to organise their classrooms so that they have the opportunity to interact with their pupils: to offer explanations which develop thinking, to encourage speculation and hypothesis through sensitive questioning, to create, above all, a climate of interest and purpose.

106 Working in these ways allows the teacher to understand how the pupil is thinking and to influence that thinking. These are powerful techniques for promoting progress in learning. The problem is, of course, to find sufficient time, given the number of pupils typically to be found in a primary classroom. But teachers need to reject the essentially unrealistic belief that pupils' individual differences provide the central clue as to how the simultaneous teaching of many individuals can be organised. The goals of primary education are common to all pupils. It is with this reality that planning for teaching should start.

Matching the task to the pupil

107 Standards of education in primary schools will not rise until teachers expect more of their pupils, and, in particular, more of able and disadvantaged children.

108 The problem is partly ideological. In some schools and local education authorities the legitimate drive to create equal opportunities for all pupils has resulted in an obsessive fear of anything which, in the jargon, might be deemed 'elitist'. As a consequence, the needs of some of our most able children have quite simply not been met. There has also been a tendency to stereotype, and, in particular, to assume that social disadvantage leads inevitably to educational failure. This waste of potential must not continue.

109 A second explanation lies in the classroom itself where a number of factors have combined to create a situation in which pupils may be set tasks which fail to challenge their level of understanding. The problem may be that the teacher's knowledge of the subject is inadequate. It may stem from a view of 'match', which, in emphasising a child's 'readiness' and requiring teachers to operate within some theoretical notion of what children of a given age or stage are capable of, positively invites low expectations. But research has shown that overcomplex patterns of classroom organisation can also contribute to the problem. If teachers are submerged by low-level routine activities, they do not have the time needed for proper diagnosis and task matching. A reduction in class sizes and the use of non-teaching assistants would obviously remove some of the pressure, but teachers can and should, in our view, review how they currently organise their classrooms in order to ensure that they are making the most efficient use possible of one of the most valuable resources schools possess: teaching time.

110 Given that significant progress could be made through a more efficient use of teaching time, we must add that the idea that at any one time learning tasks in nine subjects can be exactly matched to the needs and abilities of all the pupils in a class is hopelessly unrealistic. Match and differentiation are critical to effective learning, but they are aspirations rather than absolutes. In current circumstances, the best the teacher can do (and it is a great deal) is to devise the classroom settings and pupil tasks which give the best chance of success.

Assessing and recording progress

111 HMI surveys since the 70's show that pupil assessment has often been a largely intuitive process. Records have been similarly idiosyncratic and have tended to be limited to the basics and to focus on tasks encountered rather than learning achieved. Until recently, parents often received generalised, laconic statements which offered little real insight into the progress their children had made.

112 Many schools and LEAs had attempted to address these problems before the introduction of the National Curriculum. There is no doubt, however, that, whatever the difficulties experienced in managing the first round of standard assessment tasks, National Curriculum assessment procedures have accelerated the development process. Assessment is now becoming more open, systematic and comprehensive.

113 It is clear from evidence gathered since the introduction of the National Curriculum that effective assessment and record keeping are more likely to occur in schools which recognise that pupils' progress depends upon assessing their strengths and weaknesses and that records are needed to ensure the transmission of information from one teacher to another, from school to home and from school to school.

114 Classroom management and organisation are particularly critical to the quality of assessment. Teachers need to observe pupils systematically, to structure their learning, and to monitor their progress. If they are to do this, then the classroom must be organised in a way which makes best use of the time they can devote to such activities. Classrooms where too many activities are going on at once risk forcing the teacher into time-wasting crisis management, rather than purposeful assessment.

115 One obvious aspect of assessment which needs emphasis is that pupils need genuine feedback about the success or otherwise of their learning. The evidence suggests that while pupils are generally clear about what they have to do, they often do not receive enough information about the purposes of their learning and, what is even more important, how well they are doing. Marking pupils' work is one valuable means of feedback, provided that it offers specific, diagnostic comment and not only encouragement. Although it is logistically difficult, the act of marking work in the pupil's presence is an even more effective approach. Pupils should as far as is feasible be involved in the assessment of their own work.

116 Assessment and record-keeping are not synonymous, though they are frequently treated as such. There is little point in developing an elaborate record-keeping system if the evidence upon which the records are based is inadequate. The pre-condition for good records is, therefore, good assessment. Indeed, there is some evidence that record keeping may become an end in itself: cumbersome, time consuming and of little value to either teacher or pupil. The purposes and recipients of records need to be clearly identified and the records constructed accordingly.

Conclusion: key issues in classroom practice

117 We wish, first, to acknowledge the professional commitment and skill shown by primary teachers over the last two years. It is primary teachers in general (and Year 1 and 2 teachers in particular) who have faced the most daunting challenge in implementing the National Curriculum. We have no doubt whatsoever that very significant progress has been made.

118 We believe, however, that a new professional climate is needed. In recent decades much teaching in primary schools has suffered from highly questionable dogmas which have generated excessively complex classroom practice and have devalued the role of subjects in the curriculum. The new climate must encourage teachers to review their teaching techniques in the light of evidence about effective classroom practice and how well the pupils are making progress.

119 The introduction of the National Curriculum has meant that previously neglected subjects (such as science) are now receiving appropriate attention. It will, however, be important to review the overall structure and weight of detail of the National Curriculum Orders in order to ensure that there is sufficient time in the teaching day to provide a properly balanced curriculum.

120 Teachers must possess the subject knowledge which the Statutory Orders require. Without such knowledge, planning will be restricted in scope, the teaching techniques and organisational strategies employed by the teacher will lack purpose, and there will be little progression in pupils' learning.

121 The subject knowledge required by the National Curriculum makes it unlikely that the generalist primary teacher will be able to teach all subjects in the depth required. This is particularly the case in Key Stage 2, but is true also in Key Stage 1.

122 Successful teaching depends upon thorough planning. Progress has been made in recent years, but much remains to be done in order to ensure that all National Curriculum subjects are planned effectively across both key stages.

123 Subject teaching has an essential place in modern primary education. When topic work focuses on a clearly defined and limited number of attainment targets it, too, can make an important contribution to the development of pupil learning.

124 The organisational strategies of whole class teaching, group work and individual teaching need to be used selectively to achieve different educational outcomes. The criterion of choice must always be fitness for purpose. In many schools the benefits of whole class teaching have been insufficiently exploited.

125 Effective teaching, regardless of the organisational strategy used, requires the teacher to be able to deploy a range of techniques. These include: explaining, instructing, questioning, observing, assessing, diagnosing and providing feedback.

126 Standards will not rise until teachers demand more of their pupils. Over-complex patterns of classroom organisation frustrate assessment, diagnosis and task matching, and preoccupy teachers with management matters rather than learning tasks.

127 It is particularly important that schools undertake regular assessment of pupil progress in the fundamentally important areas of literacy and numeracy.

128 The achievement of progress in learning is the touchstone for all decisions about teaching. Good teaching does not merely keep step with the pupils but challenges and stretches their thinking.

V Raising standards through the National Curriculum

129 As we have said, in paragraphs 26 and 59, the introduction of the National Curriculum has already had positive effects. While it is obvious that many teachers are finding it difficult to cope with the new requirements, we believe that care needs to be exercised in coming to conclusions about the nature of these difficulties. They may be teething problems inevitable in a period of transition. They may stem from weaknesses in teachers' subject knowledge and understanding and/or from inadequate models of curriculum organisation and classroom management. They may be related to the nature and structure of the Orders themselves. It is timely, however, to question current assumptions and practices in order to ensure that the statutory requirements of the National Curriculum can be met as effectively as possible.

130 This is not to deny that the National Curriculum Orders need to be reviewed as the implementation process unfolds. We must be confident that the Orders as currently defined are helping to raise standards, and that, individually and collectively, they are manageable in terms of the time, resources and professional expertise available. We believe, therefore, that NCC is right to examine the balance which has been struck between knowledge, skills and understanding in each Order and the demands which the Orders make on pupils of different ages and abilities. We similarly welcome NCC's plan to review ways in which the structure of the Orders might be simplified and rendered more uniform in order to make planning and teaching easier.

131 If changes are needed, then great care must be taken to ensure that they are phased in an intelligent manner. And, equally, all revisions must stem from a consideration of the actual classroom experience of those who, day in and day out, have to teach the National Curriculum. We are pleased to note, on this latter point, that NCC plans to consult widely in order to inform its thinking and subsequent advice to the Secretary of State.

VI Raising the standards of teaching and learning

Improving classroom practice

132 There are certain very specific skills which all primary teachers need. We have identified and discussed some of these in this report. It is for each teacher to review their practice in the light of the issues we raise. Accordingly, we offer a number of propositions about aspects of classroom practice to which the evidence suggests particular attention should be devoted. This is intended not as a definitive checklist but as the basis for open and constructive discussion bearing in mind the Secretary of State's concern that teachers themselves should be at the forefront of the debate about practice.

133 **The Knowledge Base**

Classroom practice will improve if it is grounded in:

- knowledge and understanding of the subject matter to be taught;
- knowledge and experience of a range of organisational strategies and teaching techniques and awareness of evidence about the strengths and weaknesses of each;
- appropriate expectations of all the children in relation to what is taught;
- awareness of the features of the particular school and community which bear upon day-to-day classroom decisions, for example the needs of second language learners.

134 **Planning for teaching and learning**

Planning should:

- identify clear lines of progression within each of the aspects or subjects to be taught;
- identify appropriate teaching methods, classroom organisation and assessment procedures as well as content;
- be undertaken for the long, medium and short term;

- combine forward-thinking with flexibility;
- include collaborative staff action aimed at establishing a coherent curriculum framework for the school as a whole;
- include individual teacher planning in respect of each class or teaching group.

135 **Curriculum structure, balance and progression**

Curriculum practice will improve if teachers:

- maintain consistent quality across all subjects, regardless of the different amounts of time allocated to each;
- use an appropriate balance of subject and carefully focused topic work;
- preserve the integrity of each subject;
- ensure an appropriate balance of the various cross-subject activities, for example, reading, writing, talk, collaborative activity, practical work;
- establish a clear progression within each subject;
- make the most efficient use of the time available.

136 **The climate of the classroom**

Pupils should:

- work within a clear and consistent framework of values;
- experience supportive relationships between teacher and pupil, and between pupil and pupil;
- encounter a purposeful and orderly classroom climate which encourages a high level of interest.

137 **Diagnosis, assessment and task design**

Teachers should:

- formulate and demonstrate appropriate expectations of pupils in respect of their work and behaviour;

- avoid generalised assumptions about particular groups of children, being especially wary of those relating to race, gender or social background;

- create, through efficient and economic classroom organisation, the time and opportunity for assessment and diagnosis to take place, using both observation and interaction;

- provide learning tasks which will enable pupils to:

  - consolidate existing understanding
  - practise existing skills
  - build on such understanding and skills
  - encounter and master new ideas and enlarge their knowledge of the subject
  - engage in creative and imaginative thinking and action;

- combine assessment of work completed with assessment of work in progress, so as to understand the pupil's thinking as it happens;

- while recognising that 'match' can never be exact, nevertheless provide learning tasks which at the same time engage with the pupil's current level of understanding and provide the level of challenge which will move that understanding forward;

- provide pupils with constructive and meaningful feedback on their work;

- keep records of work undertaken and progress made.

138 **Teaching strategies and techniques**

Classroom practice will be more effective if teachers:

- have the skills which whole class teaching, group teaching, and one-to-one work with individuals demand;

- exploit the potential of collaborative group work;
- use a combination of these strategies, according to the purposes of the task in hand;
- avoid excessive change between one strategy and another during each teaching session;
- give each session a clear focus, avoiding excessive diffuseness and complexity;
- adopt strategies which increase pupils' opportunities for uninterrupted concentration on the tasks in hand;
- adopt strategies which increase the teacher's opportunities for direct and sustained engagement with the pupils and their learning and reduce time spent on routine matters.

It is important that teachers:

- establish clear ground rules for work and behaviour;
- ensure that these are acted on consistently;
- train pupils in the ways of working to be adopted, and in the various skills of study, enquiry, collaboration, discussion and so on.

Teachers should:

- deploy the teaching techniques of observation and listening as tools for the assessment and diagnosis of pupils' strengths and weaknesses in learning;
- use a variety of questioning modes, seeking to combine recall questions with those which challenge and encourage pupils to think for themselves;
- fully exploit the technique of explaining;
- instruct and tell whenever appropriate;
- provide feedback to each pupil on work completed and in progress which is both evaluative and critical.

It is essential that teachers:

- employ their knowledge, skills and resources to ensure that their teaching stretches and challenges pupils' thinking and does not merely keep step with it.

VII Strengthening curriculum expertise in primary schools

139 We have argued that primary teachers must have a firm grasp of the subject matter which the National Curriculum requires, an understanding of how children learn, and the ability to deploy a wide range of teaching skills. We now examine strategies designed to ensure that the first of these conditions can be met.

140 The nine subjects of the National Curriculum involve, in total, over 400 statements of attainment at Key Stage 2. Is it reasonable to expect any one teacher to possess the breadth and depth of knowledge needed to teach all nine subjects successfully? No doubt some teachers do, already, possess the necessary knowledge. Others, we are sure, will pick up much of what is needed in the course of their work. We recognise, moreover, that proposals, for example, to reduce the weight of detail in some subject Orders may emerge from the National Curriculum Council's planned review of the manageability of the National Curriculum. But, even if some revisions were to be made to the National Curriculum, we consider that Key Stage 2, and, to a lesser, but nevertheless significant, extent Key Stage 1 teachers, face a demand which may well be unreasonable and unrealistic.

141 It follows that current thinking about staff deployment needs to be examined. We work from two principles. first, every primary school, regardless of size, needs access to subject knowledge in all nine National Curriculum subjects and Religious Education. Second, this expertise needs to inform curriculum planning and teaching, directly and meaningfully, for every year group, class and pupil.

142 The current norm is to assume that every teacher can, in principle, teach all nine subjects, but recognising the difficulties, to try to ensure that specialist support is available to him/her. The model is that of the generalist class teacher aided by the curriculum coordinator.

143 We discussed the contribution which curriculum co-ordinators can make in paragraphs 78 and 79. They have had a significant impact on whole school planning and resource management, but, because of limited non-contact time and the level of skill and sensitivity which the role demands, have had less influence on actual classroom practice. There is also the well-known logistical problem of securing consultancy in all subjects, especially, but not only, in small schools. We question, therefore, whether this strategy can ever provide a complete solution.

144 The second possibility is to move towards fully specialist teaching. In terms of the argument about the centrality of curriculum expertise

this is an important idea. However, it raises many problems. If staffing a school for consultancy is difficult, how much more difficult is staffing for specialisation, even if the latter is confined, say to Years 5 and 6? In any event, the proposal that specialisation be restricted to certain year groups ignores the important point that all primary teaching needs curriculum expertise: the problems resulting from limited specialist understanding on the part of primary teachers are not restricted to Years 5 and 6 or even to Key Stage 2 generally. Some propose a gradual introduction of specialist teaching – perhaps 10 per cent in Key Stage 1, rising to 40 per cent in the lower Key Stage 2 band and 60 per cent or higher in Year 6. Others cite the example of middle schools: not so much those which perpetuate primary/secondary thinking by moving from fully generalist teaching in Year 6 to fully specialist teaching in Year 7, but those who use the conjunction of generalists and specialists in a more creative and responsive way.

145 Between specialist teaching and consultancy there is the middle position of semi-specialisation. This is a combination of consultancy/co-ordination in the advisory sense and specialist teaching, but it is also likely to include some generalist class teaching. It is also important to note that semi-specialisation can be a feature within a subject, not just of the curriculum as a whole. In other words, the subject as encountered by a given pupil may include both specialist and generalist teaching.

146 Our purpose in identifying these possibilities is to underline our belief that teaching roles for primary schools have in the past been too rigidly conceived and that much greater flexibility is now needed. In our view, there are at least four broad teaching roles available to primary schools.

- The *Generalist* who teaches most or all of the curriculum, probably specialising in age-range rather than subject, and does not profess specialist subject knowledge for consultancy.

- The *Generalist/Consultant* who combines a generalist role in part of the curriculum with cross-school coordination, advice and support in one or more subjects.

- The *Semi-Specialist* who teaches his/her subject, but who also has a generalist and/or consultancy role.

- The *Specialist* who teaches his/her subject full-time (as in the case of music in some primary schools).

147 We do not think that any one of these possibilities is the answer on its own and we recommend that every school should work out its particular combination of teaching roles in the light of two principles. The first is that the pattern of staff deployment must serve pupils' needs. This means balancing the pupil's need for security and stability with their need to follow a curriculum which, because it is rooted in secure subject knowledge, is challenging and stimulating. The second is that the strategy must work from the professional strengths of the staff and build on both their subject knowledge and their expertise in respect of specific age groups or pupils.

148 We believe that an open-minded consideration of these issues is likely to lead schools, circumstances permitting, to a combination of the four teaching roles we have identified, with a tendency towards specialisation in the upper years of Key Stage 2, but with specialist expertise available to provide the necessary support to the teachers of younger pupils as well.

149 We recognise that this kind of flexibility poses a significant challenge to current assumptions and practice. Practice will not, in our view, change until:

i the headteacher and his/her staff move beyond the intense loyalties which the class teacher system inspires to a dispassionate examination of the strengths and weaknesses of alternative or complementary approaches.

ii schools review how time, especially non-contact time, can best be used to safeguard and support the teaching function. We emphasise this because there is now firm evidence to suggest that many primary teachers, regardless of seniority, are spending much more time on administrative and planning tasks. HMI report that most non-contact time is allocated to senior staff. Headteachers may well need to find ways to allocate what non-contact time there is more equitably.

iii resourcing permits the kind of flexibility we advocate. We repeat, therefore, our belief that the significant discrepancies built into most LEAs' LMS formulae need to be reviewed as a matter of urgency so that primary schools are able to use their specialist subject expertise to the extent required.

iv appropriate initial and in-service training is available for the teaching roles envisaged. Initial training will need, as a mini-

mum, to provide for specialist as well as generalist routes into primary teaching and INSET must now be much more exactly targeted on the issue of improving subject expertise.

150 Finally, the issue of small primary schools must be addressed squarely as one of curriculum entitlement for their pupils. It is as wrong to assume that a small school cannot meet the full range of requirements of the National Curriculum as it is to assume that a large school can, but the balance of probability tends that way. There are several solutions other than the controversial one of closure. We believe that more attention needs to be paid to the scope of clustering and federation. However, the fact that each school has its own head and governing body may frustrate cooperation. For this reason, where conditions allow, we believe that the notion of combining small primary schools should be explored. This would produce a multi-site school with one governing body, one head, one development plan and a single, coherent staffing structure.

VIII The primary school headteacher: Effective curriculum leadership

151 This report is concerned with promoting effective teaching and learning. The context in which the individual teacher works is determined, however, by the quality of leadership exercised by the headteacher. We need, therefore, to examine how the headteacher can best influence the quality of classroom learning.

152 There are two broad approaches to primary headship. On the one hand, the emphasis is on the head as administrator; on the other, the emphasis is squarely on the need to provide educational leadership. There is a view at present in England that the introduction of LMS means that the primary head must become an administrator or chief executive. We reject this view absolutely. The task of implementing the National Curriculum and its assessment arrangements requires headteachers, more than ever, to retain and develop the role of educational leader. Primary schools exist to provide a curriculum which fosters the development of their pupils. Headteachers must take the leading role in ensuring the quality of curricular provision and they cannot do this without involving themselves directly and centrally in the planning, transaction and evaluation of the curriculum.

153 Headteachers are uniquely placed to look across the whole school for the purpose of judging its strengths and weaknesses, spotting incipient problems, drawing attention to work of distinction and to aspects of work which call for improvement. Among other things, headship is leadership in quality assessment and assurance and this is a role which will assume even greater importance as the National Curriculum and the Parent's Charter take full effect.

154 Plans, teaching methods, classroom organisation, work in progress and work completed all require monitoring on a regular basis. This will involve examining teachers' written plans and evaluations, close and regular discussion with individual teachers about their work, and, what is most important of all, working alongside teachers and pupils in class in order to understand what is being taught, and, because it may be different, what is being learned.

155 The information gathered through monitoring must then be evaluated in order to test aspirations against realities. How well, for example, does the work being undertaken in the school reflect National Curriculum attainment targets and programmes of study? How far do the standards being achieved reflect National Curriculum levels? How far does classroom practice reflect agreed whole school policies? What is the quality of planning, assessment and organisation? Above all, are pupils making the best possible progress? Effective curriculum leader-

ship requires headteachers to explore such questions with staff, individually and collectively, and to be able to base what they say on direct observation of teaching and learning. The criteria headteachers use in evaluating work need to be known and agreed by, all members of staff.

156 Effective headteachers have a vision of what their schools should become. They will seek to establish this vision through the development of shared educational beliefs which underpin evaluative judgements, school policies and decision making generally. The vision will have at its heart a clearly articulated view of what constitutes the school curriculum (including, very importantly, its relationship to the National Curriculum) and of how planning, teaching and evaluation will be undertaken in order to ensure that the aims and objectives of the curriculum are translated into pupil learning.

157 The result is the sense of purpose and direction so characteristic of successful schools. This sense of purpose is never created overnight. It stems from the exercise of formal authority and informal influence; it is subject to modification and reinterpretation by headteacher and staff alike as circumstances change. It both informs, and is informed by, the professional judgements of headteacher and staff; it provides a way forward, but never hardens into a dogma which constrains individual interpretation and development.

158 The development and subsequent review of school curriculum policies in order to ensure a reasonable consistency of approach amongst teachers and continuity as pupils move from one year to another is a key aspect of effective leadership. Policies should emerge from collective staff discussion, should be modified in the light of experience, and should be complemented by detailed schemes of work which provide specific guidance on planning, content, teaching methods, organisation, resources and assessment.

159 Primary headteachers must retain general oversight of the curriculum their schools provide and take a lead in decision making about curricular matters, but, as with class teachers, headteachers cannot be expected to possess the subject knowledge needed to teach every subject of the National Curriculum nor be expected to keep abreast of all relevant developments. Except where this is not possible in small schools, headteachers should delegate responsibilities for subject coordination and development to other members of staff, though they may wish to retain responsibility themselves for coordinating work in one or more subjects. They need to spell out the responsibilities and the accountabilities of coordinators thoroughly and provide support to

enable them to discharge their executive responsibilities. Coordinators should be given opportunities to lead working groups, produce curriculum guidance, order resources, provide INSET, inform the planning and work of colleagues by working alongside them in class and take part in the monitoring and evaluation of their subjects across the school. Effective headteachers take opportunities publicly to enhance the standing of their coordinators by, for example, supporting or personally implementing developments recommended by coordinators. Regular monitoring and evaluation of classroom practice by headteachers play a major part in assessing the effectiveness of coordinators and contribute to the regular appraisal of their work.

160 A further important aspect of curriculum management, as we argued earlier, is the deployment of individual teachers to make optimum use of their subject and teaching expertise. Patterns of staff deployment should be based, not on tradition or precedent, but on a review of the quality of provision and standards achieved in specific classes, year groups and the school as a whole.

161 The leadership of the headteacher is essential to the development, as well as deployment, of staff expertise. The good headteacher will combine a firm understanding of the school's curriculum needs with a sensitive appreciation of the aspirations and professional needs of his/her staff. Other members of staff, such as deputies, may coordinate INSET, but it is the headteacher who should formulate and monitor the effectiveness of staff development policies. Only then can the headteacher be confident that the school's greatest resource, the professional expertise of its teachers, is being used to maximum effect.

162 The final point we wish to emphasise is that the headteacher should lead by example. They may not have timetabled teaching commitments, but all headteachers should teach. Actions speak louder than words and the headteacher's teaching can and must exemplify their vision of what the school might become.

163 Teachers become headteachers because they have demonstrated that they are good teachers. It is obvious from our analysis of the heads' role that being a good teacher is not enough. The necessary understanding of the curriculum, of different models of curriculum organisation, of teaching methodology and of effective leadership strategies: these amount to a significant body of knowledge. At present some LEAs provide some opportunities for potential and newly appointed headteachers to develop these critical understandings. But provision nationally is notoriously patchy. We believe, therefore, that urgent

consideration should be given to the training of headteachers and other senior posts, such as deputy headteachers, with a view to using GEST resources to fund a major training initiative which concentrates on the kinds of responsibilities outlined above.

IX Initial teacher training, induction and in-service

Initial teacher training and induction

164 On 4 January 1992 the Secretary of State announced his intention to initiate a consultation process leading to a shift in the balance of training towards a much higher proportion of school-based work. At the same time schools and higher institutions are to enter into the contractual relationship of partners, the tasks of both are to be specified in terms of the competencies to be required by the trainee, and the focus of the course accreditation process is to shift from course documentation to the institutional context.

165 The consultation concerns, in the first instance, the secondary PGCE, though the Secretary of State has made it clear that he intends the model proposed for this particular course to apply as soon as possible to other routes.

166 The body with the task of advising the Secretary of State on such matters is the Council for the Accreditation of Teacher Education (CATE) and it is not part of our own remit to make recommendations about how primary teachers should be trained. However, because initial training is a major and essential element in the package of reforms we propose, we wish to make certain observations on the basis of our discussion so far.

167 First, we believe that decisions about new approaches to teacher training should be taken in the light of agreements reached about the kinds of primary teachers needed in the schools. We have argued throughout this report that primary teachers must have a firm understanding of the subject knowledge which the National Curriculum Orders require, that they must understand how children learn, and that they must be able to deploy a range of organisational strategies and teaching techniques. We believe that the time is right to review current training arrangements against these requirements.

168 There is, however, the specific and very important question central to our earlier discussion of whether primary pupils are to continue to be taught by generalists alone or by a combination of generalists and specialists. Conclusions reached on this question will clearly influence the structure and focus of training courses.

169 Second, the knowledge and skills needed for each role must be identified with precision in the same way as is now being attempted for secondary teachers. The analysis of organisational strategies and

teaching techniques which we provide in section 4 above is, in part, intended to contribute to this definition of competencies.

170 Third, decisions will need to be taken about the most appropriate form and venue for the trainee's acquisition of the competencies specified. We are clear that schools do and must have a significant contribution to make here. It is essential, however, that any decisions about school-based primary teacher training should be fully informed by prior debate on the issues of curriculum expertise and classroom practice signalled by the Secretary of State and explored in this report. We also believe that any new arrangements must ensure that the trainee teacher has the opportunity to experience the full range of teaching techniques he/she will need to deploy and to discuss the effectiveness of these techniques openly and honestly. The strengths and weaknesses of different techniques must be explored critically.

171 A further problem which must be resolved is the current overcrowding of the training course. Some degree of subject specialisation would, of course, provide a partial solution, but, since generalists will continue to be deployed in large numbers, it is likely that the majority of primary trainees will continue to need to acquire a greater range and diversity of competencies than their secondary counterparts.

172 There are two possible solutions. One is to reduce the number of subjects to be acquired by the trainee. The other is to postpone certain subjects or areas of competence until the induction phase.

173 Any formula for reducing subjects, though superficially attractive, is also problematic, at least where the generalist is concerned, since unless it can be guaranteed that the subjects not covered in initial training will as a matter of certainty be encountered later, this device would simply aggravate the curriculum imbalance and inconsistency in primary schools to which we and others have drawn attention. For this reason, we see the reform of induction as a *sine qua non* for the reform of initial training. The move to competency-specification will enable each student to enter teaching with a clear profile of the aspects of the chosen teaching role encountered and the level of competency achieved in each. It will also provide the base-line for a precisely-targeted induction programme.

174 If we return to the reform process outlined at the start of this section, we can now add a further stage. Once the various primary teaching roles are agreed, and the competencies are specified for each, they should be placed in three groups. The first group contains those

competencies seen as absolutely essential before the trainee starts teaching. The second group contains those competencies which are essential to the chosen teaching role but can be deferred until the induction stage. The third group contains the competencies which can reasonably be deferred until INSET.

175 At present, the Secretary of State's initial training criteria make no such distinction. Moreover, they contribute to the primary overcrowding problem by including aspects of teaching which could reasonably be left until induction or INSET. Since the latter are entirely chancy processes, subject to no national procedures or controls, there has, until now at least, been little alternative. The idea that initial training should be, on top of all its other tasks, some kind of insurance against the vagaries of induction and INSET, is in our view inappropriate. Initial training is just that, a preparation for the early years of teaching and a foundation on which subsequent training and development can build. We are proposing that for primary teacher training to become more effective, there must be a clearly understood division of labour between the initial, induction and INSET stages, and a formal obligation laid on those responsible for each to deliver their part of the training process.

In-service training (INSET)

176 In the light of this analysis and our earlier arguments we wish to make certain observations.

177 First, INSET must become much more firmly part of the overall cycle of professional training and development in the way we have indicated in paragraphs 173 to 175 above.

178 Second, in as far as we have identified certain critical aspects of the work of primary schools which need attention if standards are to rise and teaching quality is to improve, the following must now feature in a systematic way in INSET programmes:

- the teaching of literacy and numeracy, and particularly the teaching of reading;
- the updating of class teachers' expertise in all the National Curriculum subjects and in Religious Education;

- the strengthening of the subject expertise required for curriculum consultancy/coordination;
- training for the specialist teaching roles we have recommended, particularly for Key Stage 2 teachers;
- developing skills of assessing pupils' performance and diagnosing their needs;
- extending teachers' skills in the main organisational strategies we have discussed, giving particular attention to whole class teaching and properly focused and organised group work;
- extending teachers' skills in the key classroom techniques of explaining and questioning;
- training for the leadership roles of headteacher, deputy head and curriculum coordinator, all of whom we see as holding key responsibilities for curriculum and standards.

179 For INSET to be fully effective it must be systematically targeted and evaluated. There has been a tendency for INSET at any one time to try to cover too much. A more effective strategy would be to identify fewer priorities year by year and ensure that appropriate INSET is available in sufficient strength and quality to enable it to have a decisive impact on the work of schools in the areas targeted.

180 School-based INSET is an important tool for the improvement of professional skill. However, its impact can be limited by poor design and needless dispersal of resources which are sometimes better used more intensively.

181 Moreover, it is essential to the health of a school that it is encouraged to confront and question its assumptions and practices. The danger of school-based INSET pursued as the only in-service strategy is that it may result in some schools merely re-cycling their own inadequacies.

182 With these problems in mind, we believe it is essential that all schools have access to a mixed economy consisting of school-based and other forms of INSET involving different agencies.

183 It is equally important for INSET to be focused on key priorities so that disruption to pupil learning can be kept to an acceptable minimum.

X Conclusion

184 There is much to commend in the work of our primary schools, but the broad picture remains that of unacceptably wide differences in the quality of teaching and in the standards which primary pupils achieve between schools and between classes within schools. This patchiness is likely to remain, despite the implementation of the National Curriculum, unless action is taken simultaneously at school, LEA and national levels.

185 At school level, teachers will need to abandon the dogma of recent decades. They will need to focus firmly on the outcomes of their teaching. They will need to know more about the subjects they teach. They will need to review how they plan and structure the curriculum, paying particular attention to the balance of subject and topic teaching. They will need to direct close attention to the balance of whole class, group and individual teaching strategies and to their use of key teaching techniques like explaining and questioning. They will need to avoid approaches which are excessively complex in order to make best possible use of the teaching time available for those interactions with pupils on which learning so crucially depends.

186 Schools will need to ensure that they have the range of specialist expertise required to sustain all the subjects of the National Curriculum and to deploy such expertise in more flexible ways than hitherto, considering a variety of teaching roles from generalist to specialist.

187 In all these matters the role of the head will be central, but so too will that of the LEA in as far as improvements in primary school staffing depend partly on addressing current funding anomalies. Schools, LEAs and other providers of INSET will need to review their programmes and ensure that they give priority to the strengthening of teachers' subject expertise, especially that required for the new roles we envisage. Redefining primary teaching roles and the kinds of subject expertise and practical skill they require will also be an important part of the reform of initial training, and will require the close co-operation of schools, teacher education institutions and CATE. Initial training, induction and INSET will need to secure a coherent and continuous cycle of professional development in which each stage builds systematically on the last.

188 It goes without saying that all the observations we offer and the changes we recommend have one over-riding purpose: achieving the highest quality of teaching for all the children in our primary schools. Since this purpose is also shared by those who provide for primary education and teachers themselves we are confident that they will readily accept the invitation we now extend to discuss and address these issues.

XI Main sources consulted

1. **PUBLICATIONS**

Alexander R J (1984) *Primary Teaching*. Cassell

Alexander R J (1991) *Primary Education in Leeds*. University of Leeds

Alexander R J (1992) *Policy and Practice in Primary Education*. Routledge

Bennett S N (1976) *Teaching Styles and Pupil Progress*. Open Books

Bennett S N (1991) *Group Work*. Routledge

Bennett S N (1992) *Managing Learning in the Primary School*. Association for the Study of Primary Education

Bennett S N, Desforges C, Cockburn A, Wilkinson B (1984) *The Quality of Pupil Learning Experiences*. Lawrence Erlbaum

Bennett S N, Dunne E (1992) *Managing Classroom Groups*. Simon and Shuster

Bennett S N, Turner-Bissett R (1991) 'Subject matter knowledge and teaching performance'. University of Exeter

Bennett S N, Wragg E C, Carré C G, Carter D S G (1992) 'A longitudinal study of primary teachers' perceived competence in, and concerns about, National Curriculum implementation'. *Research Papers in Education*, February 1992

Blyth W A L (1990) *Making the Grade for Primary Humanities*. Open University Press

Board of Education (1931) *The Primary School* (Hadow Report). HMSO

Campbell R J (1985) *Developing the Primary School Curriculum*. Cassell

Campbell R J, David T (1990) *Depth and Quality in Children's Learning*. University of Warwick

Campbell R J, Evans S St J, Packwood A (1991) *Workloads, Achievement and Stress: Two Follow-Up Studies of Teacher Time in Key Stage 1 Commissioned by the Assistant Masters and Mistresses Association.* University of Warwick

Campbell R J, Neill S St J (1990) *Thirteen Hundred and Thirty Days: Final Report of a Pilot Study of Teacher Time in Key Stage 1 Commissioned by the Assistant Masters and Mistresses Association.* University of Warwick

Carré C (1991) 'Understanding of subject matter knowledge during a one year initial training course for primary teachers'. University of Exeter

Cato V, Whetton C (1990) *An Enquiry into LEA Evidence on Standards of Reading of Seven Year Old Children: a Report by the National Foundation for Education Research.* NFER

Central Advisory Council for Education (England) (1967) *Children and their Primary Schools* (Plowden Report). HMSO

Cresswell M, Grubb J (1987) *The Second International Mathematics Study in England and Wales.* NFER

Croll P, Moses D (1985) *One in Five.* Routledge

Croll P, Moses D (1988) 'Teaching methods and time on task in junior classrooms' in *Educational Research* 30:2

Council for the Accreditation of Teacher Education (1992) *Report on the Review of the Training of Teachers to Teach Reading.* DES

Department of Education and Science (1975) *A Language for Life* (Bullock Report). HMSO

Department of Education and Science (1978) *Primary Education in England: a Survey by HM Inspectors of Schools.* HMSO

Department of Education and Science (1982a) *Education 5-9: an Illustrative Survey of 80 First Schools in England.* HMSO

Department of Education and Science (1982b) *The New Teacher in School: a Report by HM Inspectors.* HMSO

Department of Education and Science (1982c) *Mathematics Counts* (Cockcroft Report). HMSO

Department of Education and Science (1983) *9-13 Middle Schools: an Illustrative Survey*. HMSO

Department of Education and Science (1987) *Primary Schools: Some Aspects of Good Practice*. HMSO

Department of Education and Science (1988) *The New Teacher in School: a Survey by HM Inspectors in England and Wales 1987*. HMSO

Department of Education and Science (1989a) *Aspects of Primary Education: the Teaching and Learning of Science*. HMSO

Department of Education and Science (1989b) *Aspects of Primary Education: the Teaching and Learning of Mathematics*. HMSO

Department of Education and Science (1989c) *Aspects of Primary Education: the Teaching and Learning of History and Geography*. HMSO

Department of Education and Science (1989d) *Standards in Education 1987: the Annual Report of HM Senior Chief Inspector of Schools*. DES

Department of Education and Science (1990a) *The Teaching and Learning of Language and Literacy*. HMSO

Department of Education and Science (1990b) *Standards in Education 1988-9: the Annual Report of HM Senior Chief Inspector of Schools*. DES

Department of Education and Science (1991a) *Standards in Education 1989-90: the Annual Report of HM Senior Chief Inspector of Schools*. DES

Department of Education and Science (1991b) *The Implementation of the Curricular Requirements of ERA: an Overview by HM Inspectorate on the First Year, 1989-90*. HMSO

Department of Education and Science (1991c) *Assessment, Recording and Reporting: a Report by HM Inspectorate on the First Year, 1989-90*. HMSO

Department of Education and Science (1991d) *In-Service Training for the Introduction of the National Curriculum: a Report by HM Inspectorate, 1989-90.* HMSO

Department of Education and Science (1991e) *English, Key Stage 1: a Report by HM Inspectorate on the First Year, 1989-90.* HMSO

Department of Education and Science (1991f) *Science, Key Stages 1 and 3: a report by HM Inspectorate on the First Year, 1989-90.* HMSO

Department of Education and Science (1991g) *Mathematics, Key Stages 1 and 3: a Report by HM Inspectorate on the First Year, 1989-90.* HMSO

Department of Education and Science (1991h) *National Curriculum and Special Needs: Preparations to Implement the National Curriculum for Pupils with Statements in Special and Ordinary Schools, 1989-90.* HMSO

Department of Education and Science (1991i) *Testing 7 Year Olds in 1991: Results of the National Curriculum Assessments in England.* HMSO

Department of Education and Science (1991j) *Aspects of Primary Education in France: a Report by HMI.* DES

Department of Education and Science, Assessment of Performance Unit (1981) *Mathematical Development: Primary Survey No 2.* HMSO

Department of Education and Science, Assessment of Performance Unit (1982) *Language Performance in Schools: Primary Survey Report No 2.* HMSO

Department of Education and Science, Assessment of Performance Unit (1983) *Science Report for Teachers 1: Science at Age 11.* HMSO

Department of Education and Science, Assessment of Performance Unit (1988a) *Science at Age 11: a Review of APU Survey Findings, 1980-84.* HMSO

Department of Education and Science, Assessment of Performance Unit (1988b) *Language Performance in Schools: a Review of APU Language Monitoring, 1979-83.* HMSO

Department of Education and Science, Assessment of Performance Unit (1989) *Science at Age 13: a Review of APU Survey Findings, 1980-84.* HMSO

Desforges C (1986) *Understanding the Mathematics Teacher: a Study of First School Practice.* Falmer

Elliott J (1980) 'The implications of classroom research for professional development' In Hoyle E (ed) *World Yearbook of Education.* Kogan Page

Foxman D, Keys W (1989) *A World of Difference.* NFER

Galton M (1989) *Teaching in the Primary School.* David Fulton

Galton M, Fogelman K, Hargreaves L, Cavendish S (1991) *The Rural Schools Curriculum Enhancement National Evaluation (SCENE) Project: Final Report.* HMSO

Galton M, Patrick H (eds) (1990) *Curriculum Provision in the Small Primary School.* Routledge

Galton M, Simon B, Croll P (1980) *Inside the Primary Classroom.* Routledge

Galton M, Simon B (eds) (1980) *Progress and Performance in the Primary Classroom.* Routledge

Galton M, Williamson J (1992) *Groupwork in the Primary School.* Routledge

House of Commons (1986) *Achievement in Primary Schools: Third Report from the Education, Science and Arts Select Committee.* HMSO

Inner London Education Authority (1985) *Improving Primary Schools: Report of the Committee on Primary Education.* ILEA

Keys W (1987) *Aspects of Science Education in England and Wales.* NFER

Lake M (1991) 'Surveying all the factors: reading research' *Language and Learning,* 6

Lapointe A (1989) *A World of Difference.* ETS/LAEP

McNamara D (1991) 'Subject knowledge and its applications: problems and possibilities for teacher educators'. *Journal of Education for Teaching*. 17:2

Mortimore P, Sammons P, Stoll L, Lewis D, Ecob R (1988) *School Matters: the Junior Years*. Open Books

National Curriculum Council (1991) *Report on Monitoring the Implementation of the National Curriculum*. NCC

Nias J (1989) *Primary Teachers Talking: a Study of Teaching as Work*. Routledge

Nias J, Southworth G, Yeomans R (1989) *Staff Relationships in the Primary School: a Study of Organisational Cultures*. Cassell

Pollard A (1985) *The Social World of the Primary School*. Cassell

Postlethwaite N (1985) 'The bottom half in lower secondary schooling' in Worswick G (ed) *Education and Economic Performance*. *Gower*

Postlethwaite N (1988) *Science Achievement in 17 Countries: a Preliminary Report*. Pergamon

Robitaille D, Garden R (eds) (1989) *The IEA Study in Mathematics II: Contexts and Outcomes of School Mathematics*. Pergamon

School Examinations and Assessment Council (1989) *APU Mathematics Monitoring 1984-88 (Phase 2)*. SEAC

School Examinations and Assessment Council (1991a) *Language for Learning: a summary report on the 1988 APU surveys of language performance*. SEAC

School Examinations and Assessment Council (1991b) *The APU Experience*. SEAC

School Examinations and Assessment Council (1991c) *APU Mathematics Monitoring, Phase 2*. SEAC

Shulman L S (1986) 'Those who understand: knowledge growth in teaching'. *Education Researcher* 15:2

Shulman L S (1987) 'Knowledge and teaching: foundations of the new reforms'. *Harvard Educational Review*, 57

Simon B, Willcocks J (eds) *Research and Practice in the Primary Classroom.* Routledge

Smith P J, Tomlinson S (1989) *The School Effect: a Study of Multi-Racial Comprehensives.* Policy Studies Institute

Taylor P H (1986) *Expertise and the Primary School Teacher.* NFER-Nelson

Tizard B, Blatchford P, Burke J, Farquahar C, Plewis I (1988) *Young Children at School in the Inner City.* Lawrence Erlbaum

Turner M (1990) *Sponsored Reading Failure.* Education Unit, Warlingham

Wittrock M (ed) (1986) *Third Handbook of Research on Teaching.* Macmillan

Woods P (1990) *Teacher Skills and Strategies.* Falmer

Wragg E C (1989) *Classroom Teaching Skills.* Routledge

Wragg E C (1992) *Primary Teaching Skills.* Routledge

Wragg E C (1992) *Class Management.* Routledge

Wragg E C (1992) *Explaining.* Routledge

Wragg E C (1992) *Questioning.* Routledge

Wragg E C (1992) *Effective Teaching.* Routledge

Wragg E C, Bennett S N (1990) *Leverhulme Primary Project Occasional Paper, Spring 1990.* University of Exeter

2. UNPUBLISHED RESEARCH MATERIAL

We have also had access to as yet unpublished material from the following sources:

Evaluation of National Curriculum Assessment at Key Stage 1 (ENCA 1): final Report to the School Examinations and Assessment Council. University of Leeds

Leverhulme Primary Project. University of Exeter

National Foundation for Educational Research (NFER)

Primary Assessment, Curriculum and Experience Project (PACE). Bristol Polytechnic/University of Bristol

3. OTHER SOURCES

We worked within an exceptionally tight timescale (one month). Our main data source was the published and unpublished material listed above. Apart from requesting updated material from leading researchers in the field of primary education time did not permit us to invite new submissions and evidence. Despite this, we received unsolicited statements from a large number of individuals and organisations. We have attempted to take full account of all this material and are grateful to those who submitted it.