



... children, their world, their education

INTERIM REPORTS

Research Survey 3/2

THE TRAJECTORY AND IMPACT OF NATIONAL REFORM: CURRICULUM AND ASSESSMENT IN ENGLISH PRIMARY SCHOOLS

Dominic Wyse
University of Cambridge

Elaine McCreery and Harry Torrance
Manchester Metropolitan University

For other interim reports in this series, and for briefings on each report, go to www.primaryreview.org.uk

This report has been commissioned as evidence to the Primary Review. The analysis and opinions it contains are the authors' own.

Copyright © University of Cambridge 2008



Esmée
Fairbairn
FOUNDATION



UNIVERSITY OF
CAMBRIDGE

Faculty of Education



... children, their world, their education

PRIMARY REVIEW INTERIM REPORTS

**THE TRAJECTORY AND IMPACT
OF NATIONAL REFORM:
CURRICULUM AND ASSESSMENT IN
ENGLISH PRIMARY SCHOOLS**

Primary Review Research Survey 3/2

**Dominic Wyse, Elaine McCreery
and Harry Torrance**

This is one of a series of 32 interim reports from the Primary Review, an independent enquiry into the condition and future of primary education in England. The Review was launched in October 2006 and will publish its final report in late 2008.

The Primary Review, supported by Esmée Fairbairn Foundation, is based at the University of Cambridge Faculty of Education and directed by Robin Alexander.

A briefing which summarises key issues from this report has also been published. The report and briefing are available electronically at the Primary Review website: www.primaryreview.org.uk. The website also contains Information about other reports in this series and about the Primary Review as a whole. (Note that minor amendments may be made to the electronic version of reports after the hard copies have been printed).

We want this report to contribute to the debate about English primary education, so we would welcome readers' comments on anything it contains. Please write to: evidence@primaryreview.org.uk.

The report forms part of the Review's research survey strand, which consists of thirty specially-commissioned surveys of published research and other evidence relating to the Review's ten themes. The themes and reports are listed in Appendices 1 and 3.

The theme: this survey relates to Primary Review theme 3, Curriculum and Assessment.

The authors: Dominic Wyse is Fellow of Churchill College and Lecturer in Primary and Early Years Education at the University of Cambridge. Elaine McCreery is Senior Lecturer in Education at Manchester Metropolitan University. Harry Torrance is Professor of Education and Director of the Education and Social Research Institute, Manchester Metropolitan University.

Suggested citation: Wyse, D., McCreery, E. and Torrance, H. (2008) *The Trajectory and Impact of National Reform: curriculum and assessment in English primary schools* (Primary Review Research Survey 3/2), Cambridge: University of Cambridge Faculty of Education.

Published February 2008 by The Primary Review,
University of Cambridge Faculty of Education,
184 Hills Road, Cambridge, CB2 8PQ, UK.

Copyright © 2008 The University of Cambridge.

All rights reserved.

The views expressed in this publication are those of the authors. They do not necessarily reflect the opinions of the Primary Review, Esmée Fairbairn Foundation or the University of Cambridge.

British Library Cataloguing in Publication Data:
A catalogue record for this publication is available from the British Library.

ISBN 978-1-906478-22-3

THE TRAJECTORY AND IMPACT OF NATIONAL REFORM: CURRICULUM AND ASSESSMENT IN ENGLISH PRIMARY SCHOOLS

Introduction

A vast amount of literature could have been included in this survey and we have had to be selective. After a brief introduction, setting the work in context, the report reviews key empirical studies of primary school teaching and learning which are widely regarded as central to the field, pre- and post-National Curriculum; particularly Galton *et al*'s successive studies (1980 and 1999) and the Bristol 'PACE' project (an ESRC-funded longitudinal study of the introduction of the National Curriculum throughout the 1990s). These pivotal investigations are augmented by other individual studies exploring the impact of assessment and the impact of the National Literacy and Numeracy Strategies (Ofsted 2005).

The criteria for selecting those studies to be discussed included their financial independence, scope and scale. The survey paid particular attention to observational studies in order to assess the impact of reform on classroom life and pupil experience.

Historical background

Before 1988 there was no statutory state control of the primary curriculum. Schools and teachers were able to implement a curriculum which they felt met the needs of the pupils they taught, although Local Education Authorities exerted considerable influence over curriculum development. The introduction of the National Curriculum in 1988 heralded statutory control of the curriculum and marked the culmination of changes that had been developing in education over many years. The 1944 'Butler' Education Act formalised the 'end-on' structure of primary education leading to the tripartite system of secondary education (grammar, modern and technical). Selection for grammar schools was usually via the 11 plus test.

Research evidence in the 1950s indicated that:

- coaching and practice could improve 11 plus scores, thereby undermining the theoretical case for selection (that is that IQ was inherited and stable and that early selection of those who would benefit from an academic grammar school education could be done with confidence (Yates and Pidgeon 1957);
- such selection benefited middle class children disproportionately and was essentially selecting on the basis of class acculturation to schooling rather than ability (Halsey, Floud and Anderson 1961).

These findings led to the introduction of comprehensive secondary education and the gradual abandonment of the 11 plus after the election of the Labour government in 1964. Even today however 10 local authorities in England retain selection at 11 plus and 10 others retain some grammar and/or secondary modern schools within ostensibly 'comprehensive' local systems (Levacic and Marsh 2007).

The Plowden Report 1967 attempted to discover exactly what sort of education the children of the country were receiving after these various changes. It advocated an approach to education which was child centred and based on enquiry, and which has been generally

labelled as 'progressive'. However HMI evidence suggested such an approach was not widespread and later research evidence from Galton *et al* (1980) suggests that 'progressive' classroom organisation and task presentation was not typical. A similar point was made in the so-called 'three wise men' report of Alexander, Rose and Woodhead (1992), which was commissioned by the then government to review available evidence from both inspection and research about 'the delivery of education in primary schools'. It covered some 90 sources, both published and unpublished, and concluded:

The commonly held belief that primary schools, after 1967, were swept by a tide of progressivism is untrue ... The reality ... is rather more complex. The ideas and practices connoted by words like 'progressive' and 'informal' had a profound in certain schools and LEAs. Elsewhere they were either ignored or ... 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.

(Alexander, Rose and Woodhead 1992, paras 19-20).

Nevertheless between the 1960s and the 1980s, there appeared to be a growth in focus on the curriculum among teachers, and a public perception of school autonomy, with the emergence of classroom based research and professional subject associations, and curriculum development projects, stimulated and supported by the government-funded Schools Council. Emerging interest in curriculum was also reflected in publications produced by the Department for Education and Science.

In parallel with this rise of autonomous teacher professionalism there also began to emerge a dissatisfaction among government ministers that schools were too free to do as they please, with little apparent accountability. Some were critical in particular of the supposedly too unstructured 'child-centred approach' (viz. the Black papers and the William Tyndale affair, cf. Ellis *et al* 1976). This criticism culminated in the 1976 James Callaghan 'Ruskin Speech' in which schools' role in preparing the future generation to contribute to the country's economic success was articulated.

The origins of the Education Reform Act 1988 can be found in this debate about school autonomy, the response to the economic crises of 1970s and the increasing link being made between education and economic needs. The notion of 'accountability' emerges and the perceived need for governmental control over education, and in particular for control over expenditure related to 'value for money' in terms of the national investment in education.

The impact of the Education Reform Act 1988 began to be felt in schools when it was introduced to Key Stage 1 in primary schools in 1989. The 1988 Act (and subsequent legislation) introduced a range of changes at the same time and in many ways it is difficult to unpack the impact of the National Curriculum from the other changes that took place around the same time or shortly afterwards (including the introduction of national testing, publication of results and changes to school inspection).

The explicit aims of the National Curriculum were to raise educational standards and make schools more accountable to the public.

Research on teaching and learning in primary classrooms

One of the key issues that has been addressed by empirical work on primary education in the period from 1980 to 2006 is the nature of teacher-pupil interaction and its impact on the quality of pupil learning. The extent to which primary teachers' practice has changed over

this period also continues to be of interest to researchers. Some studies have been replicated or partly replicated offering a longitudinal dimension to the field. Galton *et al*'s (1980) ORACLE (Observational Research and Classroom Learning Evaluation) project is such a study. The selection of schools in the research was related to a wider programme of research on school transfer that the authors were carrying out at the time. Three Local Education Authorities (LEAs) were involved covering 58 classes in 19 schools. The study's main findings were that, contrary to media and political commentary, the primary curriculum had not been strongly influenced by the recommendations of the Plowden Report for cooperative group work of the investigational kind, and that primary classrooms had retained the general pattern of the traditional curriculum and classroom organisation (Galton *et al* 1980: 155).

Galton *et al* (1999a) replicated the earlier pre-National Curriculum study. The replication showed some clear differences from the earlier period. The timetable of the primary curriculum had become one which was similar to secondary schools with its identification of particular subjects and clear timeslots for these subjects. Class teaching (teaching delivered to the whole class) had increased from 19 percent to 35 percent of all teachers' interaction with pupils. A summary journal article reviewing both studies concluded:

Teaching in today's primary schools at Key Stage 2 is very much a matter of teachers talking and children listening. Of this talk by far the largest amount consists of teachers making statements... Open or speculative or challenging questions ... are still comparatively rare. Even in science, where the highest percentage of open questions was recorded, teachers were three times more likely to require a single correct answer than they were to invite speculation. The demands of the programmes of study in the various National Curriculum subjects, even after the Dearing (1993) review, still appear to place too heavy an imperative on teachers to cut down the amount of pupil participation in order to 'get through' the curriculum content.

(Galton *et al* 1999b: 33).

The emphasis on task and routine as part of pupil-teacher interaction were confirmed by Alexander's work. As part of an extensive data-set which was gathered to evaluate an ambitious curriculum and staff development initiative by Leeds LEA, Alexander (1997) included systematic observation of classroom practice. The observational study of classroom practice had a sample of sixty schools. The schedule for systematic classroom observation was based on Galton *et al*'s (1980) work. Alexander found that 'work and associated routine interactions accounted for nearly two thirds of the total of teacher-pupil interactions ... Although there were large differences between classes, in general individual children ... were involved in very few interactions with their teachers' (p 82).

The study by Mortimore *et al* (1988) is regarded internationally as a particularly strong example of school-effectiveness research methodology (Teddlie and Reynolds 2000) and one of the few studies of its kind to address primary education. The study took place over four years and utilised a wide range of quantitative and qualitative data including: measures of the pupil intakes to schools and classes; measures of pupils' educational outcomes; and measures of the classroom and school environment. The sample was 2000 pupils from 50 schools selected randomly from the 636 schools in a LEA. Data was collected in relation to cognitive and non-cognitive outcomes and included systematic observation of lessons using ORACLE study tools.

Mortimore *et al* concluded that a number of features were indicative of effective primary teaching. In general the aims that teachers expressed for their pupils were deemed to be worthwhile but their implementation was less effective when teachers had low expectations of particular groups of pupils: 'Thus, the first implication for all classroom teachers must be

the need to focus carefully on classroom practice and to challenge the existence of such differential expectations.’ (p 286) Effective teaching involved structured sessions which allowed pupils freedom to manage their own work within a framework which ensured that important aspects were not omitted, and that time was not wasted. Intellectually challenging teaching was desirable and ‘more likely to arise from group or class sessions than from individual interactions, which tended to be preoccupied with classroom management issues’ (p 287). A work-centred environment and limited focus within sessions (with not more than two curriculum areas) was a feature of more effective teachers. Although ‘Most teachers preferred to unify as much of the curriculum as possible through project or topic themes, whilst retaining the distinct character of subjects such as mathematics, and to some extent, language work ... teachers tended to prefer teaching in one curriculum area at a time. Almost three-quarters of the observations took place during single subject lessons, the remainder occurring when the children were working in more than one curriculum area.’ (p 80) Mortimore *et al* also concluded that maximum communication between teachers and pupils was important. ‘The main implication of this finding for classroom teachers is that, whilst organisation before the pupils arrive is important, once they are in the classroom, the emphasis should be on communication and interaction ... as noted earlier, whenever teachers engaged the attention of the whole class, they increased, vastly, the number of opportunities for communication and especially for higher-order questions to be posed or statements to be made’ (p 288). In common with the studies reviewed above Mortimore *et al* identified the importance of the nature of teacher-pupil interaction as a significant feature of primary education.

The ‘PACE’ project 1989-1997

In 1994 the first of four books from the Primary Assessment Curriculum and Experience (PACE) project appeared. This project was an ESRC-funded longitudinal study designed to monitor the impact on primary schools of the 1988 Education Reform Act. Its initial aim was to: ‘describe and analyse the responses of pupils and teachers in infant schools and departments to the National Curriculum, to collect views from head teachers and teachers concerning what was being proposed and what they thought its likely impact would be, and to explore the kinds of strategies schools were evolving to manage the changes impacting upon them’ (Pollard *et al* 1994: 3).

The project sought to contribute to understanding the complex ‘web of social forces’ surrounding education and asked questions such as:

- Would the National Curriculum bring in more competition between children?
- Would it change children’s attitudes towards learning?
- Would it affect teachers’ practice?

The project continued to 1997 and was divided into three phases of data collection; October 1989 - December 1992, January 1993 – December 1994 and January 1995 – August 1997. Its longitudinal nature meant that the first cohort of children experiencing the National Curriculum in the first year of their primary education could be followed until they reached Year 6. Thus the second book (Croll 1996) followed the children into Key Stage 2, and the final two books revisited them in Years 5 and 6 (Osborn *et al* 2000; Pollard and Triggs 2000).

The 1989 - 1992 project focussed on Key Stage 1 because the Act impacted on this age group first. Fieldwork included observations, questionnaires and interviews with 48 headteachers,

102 teachers and 54 pupils, in 48 schools across eight Local Education Authorities (LEAs). The second stage of the project followed the children from Key Stage 1 into KS2, years 1-4. This involved the same schools and largely the same group of head teachers (though a few had changed); but it involved a different sample of teachers teaching the older classes. Some children also changed because they moved out of the schools.

Impact of the National Curriculum 1989-1992

The first years of the National Curriculum reaffirmed the historical emphasis on Maths and English, with the new introduction of Science to the 'core'. Teachers felt that the 'broad and balanced' curriculum promised was not achieved. The National Curriculum generated a move towards stronger subject classification and a reduction of topic-based and thematic teaching. Teachers reported problems with the amount of content that was to be covered.

Teachers also reported they had had to change their teaching approach and classroom practice. By 1992 there was a sense of loss of individual autonomy (with less freedom to choose the curriculum and operate independently within individual classrooms) but also a new form of professionalism which involved collaborative and more rigorous curriculum planning within and across year groups, with more focus on progression, differentiation and coherence. However, this, coupled with curriculum overload and the demands of assessment, led to an intensification of teachers' work load. At the same time the teachers were taking more direct control over pupil work and organisation in the classroom; there was more teacher direction over pupil activity, more whole class teaching, more grouping by ability.

Pupils interviewed at Key Stage 1 showed strong preferences for activities that offered interest, success, activity and fun. Among the things they disliked were: activities that led to boredom, were perceived as difficult or involved extended periods of sitting, listening or writing, and the core subjects appeared to be less favoured than others. At the time the PACE authors commented: 'At face value, this would seem to suggest that pupil motivation regarding the most important subjects of the curriculum was a concern and that the curriculum as a 'planned intervention' was proving inadequate to harness the interest of the children in support of the learning process' (Pollard *et al* 1994: 146). They go on to suggest that this may have always been the case (prior to the introduction of the National Curriculum) and in fact they found: '... little evidence to suggest that the NC had made any substantial difference at all to the curriculum as it is actually experienced by pupils' (Pollard *et al* 1994: 147)

The impact of the National Curriculum 1992-1997

In 1993, in response to teachers' dissatisfaction with a curriculum which was characterised as 'a mile wide and an inch deep' (Daugherty 1995), and a related boycott of National Testing at Key Stage 3, the Dearing Review was commissioned and published. This was designed to respond to teachers' concerns about curriculum overload and recommended 'slimming down' the statutory curriculum to free up 20 percent of curriculum time for teacher initiated activities (cf. Daugherty 1995). Various studies including PACE (also Galton 1999a and b) report that the impact of this change was marginal, affording little more than an even greater concentration on the 'basics' of English and mathematics.

The ESRC-funded CICADA study (Alexander *et al* 1996) also evaluated the impact of the national curriculum. The research focused on teacher-pupil discourse in primary classrooms, setting it in the wider contexts of (i) a national survey of teachers and (ii) classroom data

from before the legislation which heralded the reforms in question. Fourteen LEAs agreed to take part in the national survey which had 536 respondents. Classroom observation was undertaken in 1986, 1988 and 1992 in Leeds, Bradford, Calderdale, Wakefield and Bury. Transcripts of sixty lessons were subjected to computerised discourse analysis.

While the survey data confirmed the findings of other studies - namely, a scenario of considerable change in curriculum planning, management, assessment and record-keeping - the computerised analysis of the discourse data (using the categories of *discourse*, *syntax*, *pedagogy*, *curriculum*, *participants* and *lexis*) showed this taking place against a backdrop of relative continuity at the level of pedagogy. Here, independently of the reforms, teacher-pupil discourse tended towards two clear-cut and widely-differing clusters. The first involved the teacher in much more formative feedback, directing and commanding than the second, which in turn entailed higher levels of explaining, exploring, questioning and eliciting. The study offers a useful counterpoint to those studies which, grounded more in teacher perceptions, see the National Curriculum as having induced a more fundamental pedagogic change.

The PACE project found that the early 1990s saw an emerging dominance of 'scheme' systems in maths, with teachers relying on published, structured material. Furthermore, approximately half of curriculum time was devoted to the basic skills of English and Maths. Recent research by Boyle and Bragg (2006) confirms this proportion has been maintained post-1997 with a further 10 percent of teaching time at Key Stage 2 devoted to Science. Interestingly however Boyle and Bragg (2006) also report that while the figures for English and Maths continue to increase marginally at Key Stage 2, the figure for Science is in decline from 11.4 percent in 1997 to 9.8 percent in 2004.

Impact on curriculum content

By 1997 teachers were concerned with the move from an expressive to an instrumental view of the curriculum, in which they would be seen as 'technicians who 'deliver' the curriculum. The focus on the 'core' was felt to be restrictive and while there had been an increase in time spent on science, technology and ICT, it was matched by a decrease in art, music and PE. Teachers also reported that an integrated or topic approach to teaching and learning was difficult to maintain.

Researchers' lesson observations confirmed the teachers' views, with core subjects taking up 60 percent of curriculum time. Not much time was devoted to ICT and Design Technology and the other foundation subjects were difficult to observe due to lack of curriculum time (estimated at 18 percent).

Many teachers in the study felt that the Dearing report had not had much impact in reducing curriculum overload, 25 percent saying it had made no difference at all: this finding accords with those of Galton *et al* (1999b) reported above. Of those who said it had made space, 20 percent said it did not appear to offer time for wider studies but did give some flexibility in approaching what had to be taught, including spending more time on the basics and 19 percent used it for other activities such as assembly. Only 32 percent said they used it to go into topics in more depth.

A further impact on the curriculum was the emergence of more specific subject teaching and classification of subjects, although there was some cross-curricular teaching in History and Geography. The majority of teachers seemed happy with this move, although some were concerned about their own lack of subject knowledge especially in ICT, Science and

Technology. However, they did not want to give up their class to a subject specialist following the secondary school model, even though the primary curriculum has come to resemble that of the secondary school.

The pupils' views of the curriculum appeared to change little over the six years of the study, essentially recognising mathematics and English as dominant. Furthermore, attempts to redefine the balance within core subjects had not been perceived by pupils, and so English is seen as mainly literacy (with writing disliked, and with no awareness of the role of speaking and listening), and mathematics is perceived as 'sums', with little awareness of the role of discussion, practical application or problem-solving. Similarly, in science there was little awareness of investigation. Pupils recognised that the creative curriculum had been squeezed by the core subjects, by testing and the weight of subject content. Children's access to music and ICT appeared to be dictated by lack of time, lack of resources available and limited teacher expertise. The children in the study were also very aware of the bulk of content to be covered, the demand for writing and the pressure of outcomes: 'As children moved to the end of Key Stage 2 they reported a curriculum in which the core subjects were powerfully present and which they experienced mainly through sitting, listening and writing, rather than through activity' (Pollard and Triggs 2000: 84).

The PACE research also revealed pupils' views on different curriculum areas and over the six years of the study, radical changes were seen in children's stated preferences for curriculum subjects. In Year 1 the children preferred activity, play and stories. In years 3 and 4, with their growing skills and confidence, the core subjects become more popular. However, by Years 5 and 6 there was a move away from the core and back to their Year 1 preferences, with PE, art, technology, watching television programmes and listening to stories the most popular. This demonstrates a preference for physical, expressive activity and entertainment where there is little demand for writing and assessment. The reasons children gave for their preferences included these being fun or active, or where they had some autonomy. The main reasons to dislike a subject included that it was hard, difficult to succeed at and associated with failure. However, achieving success in a subject was not necessarily linked to liking it – many high achievers still did not like core subjects, and even when children were interested in a subject, they were put off by the demand to recall and record and the lack of personal control. Furthermore, low achievers were often anxious and afraid of being exposed as failures. The researchers comment: 'It is difficult to avoid a sense of children in flight from an experience of learning that they found unsatisfactory, un motivating and uncomfortable' (Pollard and Triggs 2000: 103). This accords with Reay and Wiliam's (1999) and Hall *et al*'s (2004) reports of the narrowing and instrumental impact of National Testing on children's views of themselves and of what counts as educational success (see below).

Impact on pedagogy

By 1994, most teachers still seemed to be using a mixture of approaches to teaching relevant to subject and task, but the emergence of more individual work became apparent in Key Stage 2, relating to the demands of Standardised National Tests (SATs). The teachers reported 'considerable change' to their classroom teaching (52 percent of teachers in Key Stage 1, 47 percent in Key Stage 2), but by 1995 the Key Stage 2 figure drops, suggesting that they are getting used to the NC after the first few years. The core activities of teachers appeared to be focussed on the content of the curriculum, assessment and record-keeping.

Teachers reported that there had been an increase in whole class teaching (especially in year

6 with SATS preparation) and lesson observations supported this. In a separate paper from the same project, McNess *et al* (2001) report that:

Whole class teaching and individual pupil work increased at the expense of group work ... [there was] a noticeable increase in the time spent on the core subjects ... [and] teachers ... put time aside for revision and mock tests ...

(McNess *et al* 2001: 12-13).

At Key Stage 1 the teachers mainly used collaborative group work, and individual and teacher interaction with children was mainly to do with instruction. At Key Stage 2 a mixture of strategies was used, but whole class and individual work dominated. A typical Key Stage 2 lesson consisted of a whole class teacher input followed by individual tasks. The reasons given for this strategy included a lack of resources, time, and differentiation. Collaborative group work including scientific investigation fell victim to these restraints. There was also a rise in direct instruction in years 5 and 6 and one-to-one interaction was rare.

Teachers used a range of grouping strategies, mainly according to ability, although some used gender and friendship grouping. They felt that the National Curriculum had not changed their practice in this respect. Pupils in year six appeared very aware of the ability grouping system and this similarly accords with the findings of Reay and Wiliam (1999) and Hall *et al* (2004).

Positive outcomes of the changes included the development of the role of curriculum co-ordinators, who were able to support staff in relation to subject knowledge. There was also more detailed planning, more progression and continuity and improved practice in passing on information to the children's next teacher.

Impact on the pupils' experience

The 1997 PACE data reports on children's views of their teachers' teaching. The learning process did not appear to be discussed and there was a sense of simply 'getting through the task' (p178). This accords with Torrance and Pryor's (1998) findings that children often have great difficulty in understanding the purpose of tasks which they are given by teachers. Pupils simply get on with tasks as best they can, focusing on producing an acceptable outcome (that is, acceptable to their teacher), rather than the formative experience or the process of learning.

Possibly the most worrying findings of the PACE project are the effect of the changes on pupils' attitudes towards learning. By the end of Key Stage 2 the children recognise that the curriculum is very tightly framed around specific subjects, that there is little opportunity for 'free choice' and that although they value opportunities to make their own learning decisions, they rarely get the chance (found mainly in non-core subjects such as Art and Technology). The pressure of time and workload was very apparent to children. Their motivation to learn was affected by the boredom associated with many tasks, the degree of clarity or ambiguity, the confidence in their own skills, and whether the work was felt to be 'too hard'.

Impact on teachers' professionalism and teacher-pupil relationships

The third publication from the PACE project focused on the reactions of teachers to governmental initiatives. It was concerned to discover what impact teachers believed recent policies had had on their work. The book traces teachers' changing perceptions from the beginning of the project up to 1996. A key finding is the recognition that educational

priorities had been increasingly imposed from outside the school: 'various policy initiatives have ensured that primary school teaching has become increasingly framed by requirements that are external to the school itself' (Osborn *et al* 2000: 9). In some cases this had led to a feeling of loss of fulfillment and autonomy. However it was also noted that teachers' own professional confidence is a key factor in mediating change and that this can be affected by the teacher's biography, career path and how much support they receive from colleagues.

In the first phase of the PACE project, findings indicate that the National Curriculum may have had a positive impact on curriculum coherence and teacher professionalism as they collaborated to plan implementation. However, at the same time many teachers felt alienated from their work as they struggled to comprehend central prescription and implement curriculum content with which they might not agree. They also reported significant curriculum overload and work overload. In the later stages of the PACE investigation, a picture is drawn of a 'pressurised classroom context' (p140), which is more intense than hitherto and highly teacher controlled, with little scope for pedagogic flexibility and little pupil autonomy.

More recent research evidence

Webb (1993, and 2006 with Vulliamy) also investigated the impact of the National Curriculum, but later brought their evidence up to date with specific reference to the introduction of the National Literacy and Numeracy Strategies. The sample for the first study consisted of 50 schools spread across 13 local authorities. Interviews with local authority advisors/inspectors from the 13 local authorities were conducted. Data from the schools were gathered during a one day visit to each school. This included factual information; samples of planning and record keeping; an interview with the head teacher; observation of a Key Stage 2 class for a lesson; an interview with the observed class teacher; and informal conversations. The teachers in Webb's study most commonly expressed the following views:

1. There was support for the concept of a broad and balanced curriculum.
2. The planning for all subjects was exceedingly complex and time-consuming and there were particular problems for mixed age classes.
3. There was a conflict between an emphasis on 'the basics' and the aim of a broad balanced curriculum.
4. The teachers felt a need for stability, and time for critical reflection (p 83).

By 2006, when the study was replicated, with 48 of the original 50 schools, the views of teachers had changed radically. Teachers viewed the core of their professionalism 'as their ability to motivate and develop children's learning' (p 126). Webb and Vulliamy (2006) claimed that suggestions that the national strategies had 'deskilled' teachers were misplaced. However this conclusion is difficult to reconcile with the evidence presented earlier in their report which shows that the imposition of the literacy and numeracy strategies:

... challenged the one remaining area of teacher expertise not previously subject to government prescription and further undermined teacher competence and confidence. Notwithstanding the strong resentment of such government imposition still felt by many teachers, they expressed approval of aspects of the National Literacy Strategy and over half 'strongly liked' the National Numeracy Strategy.

(Webb and Vulliamy 2006: 36).

Webb and Vulliamy (2006) concluded that ‘the last five years or so have witnessed such extensive changes in Key Stage 2 classrooms that any notion of a wholesale return to earlier practices is out of the question’ (p 125). This finding needs careful interpretation in view of the findings from other studies (some reviewed above and others covered in the section below on the National Literacy Strategy) which show relative continuity in classroom interaction. Indeed Webb and Vulliamy make reference to the findings from systematic classroom observation studies and suggest that we should perhaps not be surprised that the hopes for interactive whole-class teaching have not been met, but they do not make clear why this should not be regarded as surprising. One possible explanation for the different arguments about the extent of change is that the political rhetoric advocating interactive teaching was not realised in action because it was contradicted by the more simple aim of introducing more whole class teaching *per se*.

The most extensive study of primary education in recent years is Alexander’s *Culture and Pedagogy* (Alexander 2001). This was a macro-micro comparative study of the relationship between culture and pedagogy in England, France, India, Russia and the United States undertaken at three levels: national, school and classroom. It used a combination of methods within a historical and comparative framework: interview and documentary analysis (national level); interview, observation and documentary analysis (school level); interview, observation (two observers), videotape, still photography, documentary analysis (classroom level). The dataset derived from 30 schools in the main *Five Cultures* study, with reanalysis of earlier project data from a further 30 English schools and reference to 40 others. It included 98 interviews (audiotape recorded and transcribed); 166 lessons observed (comprising 106 in the main *Five Cultures* study, together with reanalysis of a further 60 from English schools in previous projects); videotape recordings (130 hours from main *Five Cultures* study; supplementary English data (mixture of videotape and audiotape); lesson transcripts; photographs (1500 from *Five Cultures* schools and classrooms); documents (such as national, regional, local and school policy documents, curriculum and lesson plans, assessment materials and examples of children’s work).

The analysis of classroom practice was undertaken within a specially-devised framework which extended the scope of what was observed in studies such as ORACLE and PACE and which focused on what were defined as the ‘cultural invariants’ of teaching, using a model comprising (i) the immediate context or *frame* within which the act of teaching is set, (ii) the teaching *act* itself, and (iii) its *form*, and then a set of elements within each such category. Thus, the core acts of teaching (*task, activity, interaction* and *assessment*) were framed by *space, pupil organisation, time* and *curriculum*, and by *routines, rules and rituals*, and were given form, and were bounded temporally and conceptually by the *lesson* or teaching session.

It is very difficult to adequately summarise *Culture and Pedagogy* because of its breadth of focus. One of the main features is the way that the methodological framework enables us to reflect upon teaching in England through the international cultural context. For example at the systems level Alexander warned of the problems of over-centralisation and showed significant differences between the countries’ extent of control revealed in their education systems. In England, it is argued, policy changes over at least a 20 year period have been based on a “deficit pathology” as part of press and government collusion (p. 145).

At the classroom level, as part of a plethora of findings about classroom practice, Alexander cautioned against simplistic notions of *pace* that have been seen by some in England as the idea that quicker teaching unproblematically equates to more effective learning. The complexities of the variable ‘time on task’ were also explored:

In both England and Michigan, especially the latter, we found pupils spending higher proportions of time than in France and Russia on routine matters and awaiting the teacher's attention. These differences could be illuminated by reference to certain characteristics of classroom organisation: the focus on groups and individuals; the considerable amount of time given to one-to-one monitoring (which left others expecting, and waiting for, the same degree of attention); variability and unpredictability in lesson routines; and the much greater extent of divergence between one pupil and another which the long, unitary central stages of lessons encourage (but which episodic structures discourage). Yet there were always exceptions, and in this and other matters it was therefore clear that organisational tendencies could be outweighed by cultural considerations and factors such as individual teacher competence.

(Alexander 2001: 538).

Alexander (2001) shows that teachers in England interacted substantially with individuals and groups as well as the whole class but that there were frequent disciplinary interactions. With regard to monitoring, teachers in England spent a great deal of time on this and it tended to be supervisory more than instructional.

Assessment

Following the abolition of the 11 plus, primary schools were not subject to any form of national testing or measurement-based accountability for more than 20 years (1964-1988), though as we have seen, a minority of English local authorities (10) and Northern Ireland still retain selection at 11 plus (Levacic and Marsh 2007). As concerns about school standards and accountability grew, and policymakers looked for evidence of the quality and standards of primary education, they found none. The Labour government of 1973-79 had set up a sample-based measurement programme, the Assessment of Performance Unit (APU), to try to provide evidence of national standards at age 11 and 15 years, but such detailed research evidence proved far too arcane for public consumption, and in any case tended to highlight the difficulties of measuring change over time, rather than provide easy sound-bites for public debate (Torrance 2003). The 1980s Conservative government of Margaret Thatcher, with Kenneth Baker as Education Secretary, introduced a programme of National Testing at ages 7, 11, 14 and 16 (GCSE) to accompany the National Curriculum. The claim was that:

A national curriculum backed by clear assessment arrangements will help to raise standards of attainment by:

- (i) ensuring that all pupils study a broad and balanced range of subjects...
- (ii) setting clear objectives for what children...should be able to achieve...
- (iii) ensuring that all pupils...have access to...the same...programmes of study which include the key content, skills and processes which they need to learn...
- (iv) checking on progress towards those objectives and performance at various stages...

(DES 1987: 3-4).

The testing arrangements have gone through many transformations as initial policy clashed with systemic reality (Daugherty 1995; Torrance 2003). National testing was originally envisaged to apply to all ten National Curriculum subjects, for all pupils, at four ages/stages of the National Curriculum (7, 11, 14 and 16 years). It was also originally envisaged to incorporate extensive teacher assessment and use of practical, 'authentic', 'Standard Assessment Tasks' (SATs), rather than traditional paper-and-pencil tests. By the mid-1990s it had become condensed into narrow paper-and-pencil tests of the 'core' subjects of English, Maths and Science, as the sheer scale of the enterprise defeated the original plans. A key policy lesson is that the larger the scope and scale of the assessment arrangements, the simpler and narrower must be the technology employed (Torrance 1995). And in this respect the political imperative of testing every child at three key stages (plus GCSE), defeated the

educational arguments about employing sophisticated 'authentic' classroom tasks.

In the early 1990s infant school teachers had little or no experience of formal assessment activities. Early research by Gipps *et al* (1995) identified three broad categories of teachers' approaches to classroom assessment: *intuitives, evidence gatherers and systematic planners*.

For [intuitive] assessment is a kind of 'gut reaction'... They rely upon their memory of what children can do and so, during the study, it was difficult for us to observe any ongoing teacher assessment or describe the processes they were using...[]...Evidence gatherers...particularly like written evidence ...'trying to get as much evidence as I can' is the aim of many of these teachers, one of whom described herself as 'a hoarder' who 'keeps everything'...[] ...Systematic planners ... plan for assessment on a systematic basis and this has become part of their practice.

(Gipps *et al* 1995: 36-42).

This early reaction of 'hoarding everything' became particularly prevalent as teachers initially thought they had to be able to demonstrate pupil achievement on all National Curriculum Statements of Attainment (SoAs). Such assumptions seemed to be fed by local authority advisers insisting on such documentary evidence. Newspaper reports quickly picked up on the fact that even with only the first few SoAs in each subject being taught, and only the 'core' subjects of maths, science and English to be reported on, infant school teachers would be dealing with 227 SoAs for each of child in the class (approximately 30) totalling 6810 SoAs per teacher per year (see Daugherty 1995: 117). Gipps *et al* (1995) report many such problems of curriculum and assessment overload, but equally note that for the first time in a generation primary school teachers, and especially infant school teachers, had to identify evidence for their judgements about pupil attainment and progress, and not just rely on 'gut reaction', with all its potential for social class, gender and racial bias.

Torrance and Pryor (1998) investigated the emerging rhetoric and practice of formative assessment in infant classrooms. Much was made of the potential of Standard Assessment Tasks (SATs), coupled with classroom-based teacher assessment, to inform teachers and pupils not only about pupil attainment and progress, but also about where learning problems might arise and what might be done to address them. Torrance and Pryor (1998) report on detailed classroom observations of 'assessment events', that is to say teacher-pupil interaction in the context of assessment, and the very act of teachers making judgements about pupil achievement, and how pupils understood those judgements.

CONVERGENT ASSESSMENT	DIVERGENT ASSESSMENT
Assessment which aims to discover <i>if</i> the learner knows, understands or can do a predetermined thing.	Assessment which aims to discover <i>what</i> the learner knows, understands or can do.
This view of assessment might be seen as tied closely to the curriculum, and less as formative assessment, rather as repeated summative assessment or continuous assessment.	This view of assessment might be seen as more oriented to pupil needs and could be said to attend more closely to contemporary theories of learning, accepting the complexity of formative assessment.

(Adapted from Torrance and Pryor 1998: 153).

They conclude that young pupils have very little understanding of what it is that teachers want them to do, or to achieve, in curricular terms, and spend most of their time trying to provide minimally acceptable products and avoid too much direct teacher attention. Where assessment was deployed more formatively, Torrance and Pryor identified teachers using it in 'convergent' and 'divergent' ways.

Torrance and Pryor conclude that:

- teachers need to be clear about their curriculum goals, shorter term learning intentions and the purpose of classroom tasks in relation to those learning intentions;
- communicate these intentions and the purpose of tasks to pupils – that is, what they want pupils to do and why they want them to do it – that is, communicate *task criteria*;
- similarly, communicate to pupils what it means to do tasks well – that is communicate *quality criteria*;
- make comments, mark work and give feedback relating to these criteria – indicating positive achievement as well as what and how to improve;
- but equally be alert to unanticipated learning outcomes and encourage them when encountered – that is, be alert to the possibilities for *divergent* as well as *convergent* assessment

(Torrance and Pryor 1998, 2001).

Torrance and Pryor also report a variety of incidents in which it is apparent that pupils are struggling to understand the demands of schooling and very early begin to realize their position in the 'pecking order' of the classroom. (Pryor and Torrance 2000; Torrance and Pryor 2003). In this their work accords with the findings of Reay and Wiliam (1999) and Hall *et al* (2004) and indeed that of the PACE project reported above. Reay and Wiliam conducted a detailed study of the impact of National Testing in one south London primary school, focusing on year 6. They describe the intense pressure of testing in year 6 and the anxiety this generates, as more and more time is spent practicing for the tests. The curriculum is narrowed to the basics of test preparation, 'correct spelling and knowing your times tables' (p 346) and pupils come to value themselves and construct their emerging identities in relation to these narrow definitions of academic success.

Hall *et al* (2004) conducted case studies of the impact of National Testing in two primary schools in a Midlands city and London. They likewise identify the overwhelming impact of formal testing, especially in year 6, reporting that:

assessment is synonymous with testing ... [and] assessment, narrowed to test-taking in preparation for SATs, is the main business of life in the last two terms of year 6 [p 804].

Further:

The major theme in this article...is the power of SATs...to shape...the way the school acts to position children, their parents and the teachers [p 802].

They note the importance of SATs in the construction of success and failure for teachers and pupils alike, in the construction of notions of 'good' and 'bad' pupils, and indeed in the construction of 'happy' or 'angry' parents. They report a similar curricular narrowing to other studies reviewed above (Boyle and Bragg 2006, Osborn *et al* 2000, Pollard and Triggs 2000), including an emphasis on literacy and numeracy in the mornings, with afternoons 'left for things like Art and PE' (p 813). Perhaps most importantly however they identify the subjectification of pupil identity to SATs activities:

SATs and the prospects of SATs are used as a policing mechanism to keep children attentive...[]...pupils are relegated to the role of question-answerers...[and]...the ideal and most worthy pupil is someone who prioritises SATs success [and] who self-polices to this end...

(pp. 805-809).

Harlen's earlier report in this series (Research Survey 3/4, Harlen 2007) confirms this focus on 'teaching to the test' (p 21-22), while Harlen and Deakin-Crick's (2002) systematic review found multiple evidence of the negative impact of high stakes testing and concluded that:

- After the introduction of the National Curriculum tests in England, low achieving pupils had lower self-esteem than higher-achieving pupils, whilst beforehand there was no correlation between self-esteem and achievement.
- When passing tests is high stakes, teachers adopt a teaching style which emphasises transmission teaching of knowledge, thereby favouring those students who prefer to learn in this way and disadvantaging and lowering the self-esteem of those who prefer more active and creative learning experiences [p 4].

These are quite extraordinary findings when one thinks of research cited previously (such as Galton *et al* and Mortimore *et al*) indicating that the quality of teacher-pupil interaction is the most important factor in improving pupil learning experiences and raising attainment.

Reay's (2006) research further investigated how far children feel included in the classroom, their view of the curriculum and their view of themselves as learners. Her research context was part of the discussion about hearing pupils' voices in education. She undertook group interviews, observations of maths/ English lessons and individual interviews in an inner city, multi-cultural primary school, with some social deprivation. In total 26 Year 6 children took part. Reay found a clear hierarchy in the class mainly based on achievement, although other factors were equally important. For example, some well-behaved clever girls were not popular because they were seen as not 'cool'. The top of the group were two able boys who were also good at PE and had university educated parents (though they had low status jobs as immigrants).

Reay suggests that children juggle their identities to find a place in the hierarchy of the classroom and she is particularly concerned about a group of quiet, poorly achieving boys at the bottom of the hierarchy. She argues that these children's views of learning and life in classrooms may never get heard due to their low status in the class. Reay suggests that the current exclusive focus on a narrowly defined form of academic achievement reproduces the status quo, giving some children a poor self image as learner; the use of labelling, for example 'gifted and talented', and ability grouping reinforce this.

The Primary National Strategy and the teaching of literacy

Excellence and Enjoyment, England's Primary National Strategy (PNS) (DfES 2003), published in 2003, offered hope to many in education of a more flexible and creative approach to the curriculum. However OfSTED's report on the primary curriculum, the National Literacy Strategy (NLS), and the National Numeracy Strategy (NNS) based on visits between 2002 and 2004 (Office for Standards in Education (OfSTED 2005) noted that few schools had made significant progress in adopting more flexible and creative ways of managing the curriculum. They also found that, 'In English, teachers' planning focuses too much on covering the many objectives in the NLS Framework for teaching, instead of meeting pupils' specific needs. This inflexibility hinders improvements in the quality of English teaching' (p 2). The claimed lack of progress by schools with regard to flexibility and creativity is perhaps indicative of the contradictions that are part of *Excellence and Enjoyment*. Although the PNS

exhorts schools to be more flexible and creative, at the same time the emphasis on the literacy and numeracy strategies remained, and was intensified.

One of the key features of the NLS and NNS has been the organisation of learning as a sequence of teaching objectives. In the report on the first four years of the NLS based on inspection visits carried out during 1998 – 2002 (Office for Standards in Education (OfSTED 2002) it was noted in relation to the teaching of literacy that, 'There is more direct teaching, the lessons have a clearer structure and learning objectives are more precise' (p 2). The encouragement by OfSTED in this and other publications, including school and teacher-training institution inspection reports, to focus on teaching objectives resulted in the practice of teachers' lessons being strongly objective-led, to the extent that objectives were written onto classroom boards and pupils were encouraged to write the objective of the lesson in their exercise books. OfSTED's change of emphasis from positive findings on precise objectives in 2002 to the criticism that teachers were focusing on them too much in 2005 could be seen as a reflection of government policy represented in the change of guidance from the NLS to the PNS rather than a rigorous and objective analysis of the evidence from inspection observations. A persistent problem with OfSTED national reports on the English and literacy curriculum has been the lack of consistent attention to particular main findings from one report to the next.

Earl *et al's* (2003) government-funded evaluation of the NLS and NNS included collection of data from schools as follows:

- a) two postal surveys (in 2000 and 2002), each to two samples of 500 schools, one for Literacy and the other for Numeracy. Parallel questionnaires went to head teachers and teachers;
- b) a postal survey to all literacy and numeracy consultants in LEAs across England in 2002;
- c) repeated visits to 10 selected schools (with various sizes, locations, pupil populations, levels of attainment) and their LEAs: 4 to 6 days in each school. The research team interviewed head teachers and teachers, observed literacy and mathematics lessons, and analysed documents;
- d) interviews with literacy and numeracy managers and consultants from LEAs of the 10 selected schools. The researchers also attended training sessions and staff meetings in some of those LEAs;
- e) observations and interviews in 17 other schools (including special schools) and LEAs. Three of these were one-day visits to schools early in 2000, while the others were single visits as part of shadowing regional directors or HMI, or attending meetings locally.

Earl *et al* (2003) found that the strategies had altered classroom practice. In particular greater use of whole class teaching, more structured lessons and more use of objectives to plan and guide teaching. Teachers' views about the strategies were more variable than head teachers who were more likely to be in favour. Head teachers and teachers were more supportive of the NNS than they were of the NLS. For the most part, both teachers and head teachers believed that NNS has been easier to implement and had had greater effects on pupil learning than the NLS. Overall Earl *et al* report a wide range of variation in teachers' opinion of the NLS ranging from positive to negative.

A problem with the development of the NLS Framework for Teaching and its associated pedagogy was the questionable evidence base, something that was addressed in a series of

publications (Wyse 2000; Wyse 2001; Wyse and Jones 2001; Wyse 2003 - Beard (2003), who was commissioned to write a review of evidence related to the NLS after its implementation published a response to this). Subsequent publications questioned the evidence base for the PNS and its literacy teaching requirements (Alexander 2004; Wyse 2006; Wyse and Styles 2007; Wyse and Jones 2008)

A series of research studies all reported that the recommended pedagogy of the NLS literacy hour was resulting in rather limited teacher-pupil interaction which was tending towards short initiation-response sequences and a consequent lack of extended discussion. Observation schedules were used in studies such as those by Hardman *et al* (2003), English *et al* (2002) and Mroz *et al* (2000). Mroz *et al* (2000) noted the limited opportunities for pupils to question or explore ideas. English *et al* (2002) found that there was a reduction in extended teacher pupil interactions. Hardman *et al* (2003) found that the NLS was encouraging teachers to use more directive forms of teaching with little opportunities for pupils to explore and elaborate on their ideas. Skidmore *et al.* (2003) used audio recordings of teacher-pupil dialogue combined with video of non-verbal communication to support their finding that teachers were dominating interaction during the guided reading segment of the literacy hour. Tymms and Merrell (2007, Research Survey 4/1 in this Series) report similar findings (p 19). Parker and Hurry (2007) interviewed 51 Key Stage 2 teachers in 2001 and videotaped observations of the same teachers in class literacy sessions focusing on teacher and pupil questions and answers. They found that direct teacher questioning in the form of teacher-led recitation was the dominant strategy used for reading comprehension teaching and that children were not encouraged to generate their own questions about texts.

Our synthesis of research in relation to the NLS Framework for teaching presents a picture which reveals some limited benefits but overall shows poor outcomes. However, Stannard and Huxford (2007) are more positive in their evaluation. John Stannard was the director of the NLS until 2000 and Laura Huxford was the training director from 1997 to 2004. Stannard and Huxford base their claims for the success of the NLS mainly on their perception of the rise in statutory test scores (we show an alternative perception of statutory test outcomes in this report). Although their account is weakened by lack of attention to relevant research and scholarship in the field, they make a number of significant points about the NLS, in particular how the process of implementation was made more difficult by strident critics of the NLS approach to reading, resulting in a disproportionate amount of time spent managing a rather narrow debate about reading at the expense of addressing a range of arguably more important factors that needed attention.

In October 2006 the new *PNS Framework for Literacy* was released with an expectation that 'the majority of schools and setting are likely to be making extensive use of the renewed Framework at some stage during this academic year' (DfES 2006: 6). The following evaluative comments about the new literacy framework are based on Wyse and Jones (2008). The first change from the NLS Framework for Teaching was that although paper copies of a reduced version of the framework were available, the full framework and guidance appeared on a PNS Frameworks website. Whereas with the NLS the names of those who developed the literacy framework were known, with the PNS Framework all the material is attributed to the DfES Standards Site and the PNS. The number of objectives in the new framework was drastically reduced in comparison with the old framework. The tendency to encourage one-off lessons was replaced with longer units of work. The division of objectives into word-level, sentence-level, and text-level was abolished.

In spite of the overall reduction in objectives the framework as a whole, which includes

many guidance documents and hyperlinks to other government resources may prove to be unwieldy and prescriptive. The types of books children will study is prescribed, the types of writing that they will carry out is prescribed. The way that this is to be taught has been specified in even more detail than the NLS. It appears that a dominant teaching model, rather than encouragement to use a range of approaches, is still being applied: 1. Analyse a text; 2. Teacher models the text; 3. Children evaluate their work 'against agreed criteria'.

The PNS objectives show a welcome reduction in the grammar objectives that were a feature of the NLS. However, as in most sections of the PNS Framework, a summary of NLS objectives is given for each section of planning to show that these are still being covered. There is also a continued recommendation to use the *Grammar for Writing* resource which explicitly addresses the objectives from the NLS. Wyse's (2001) review of empirical evidence showed that traditional grammar teaching did not enhance children's writing, something that the systematic review by Andrews *et al* (2004) confirmed; hence it seems questionable that the emphasis on grammar through reference to the old objectives is still encouraged.

The method of teaching of reading has been subject to increased control by government. As part of the new framework teachers are required, to adopt the 'synthetic phonics' approach to the teaching of reading, a recommendation that continues to be contentious and which some argue is not supported by sufficient research evidence (see Wyse and Styles 2007) but which is now part of extensive guidance documents and training for teachers.

The National Numeracy Strategy

A National Numeracy Project was introduced to a sample of 200 pilot schools in September 1996 following critical discussion of English schools' performance in the Third International Maths and Science Study (TIMSS) and a critical OfSTED report on standards in Maths (Brown *et al* 2000). This was extended to all primary schools via a full National Numeracy Strategy (NNS) in 1999. The key curriculum change was to emphasise a higher proportion of basic calculation skills (rather than understanding and application of procedures) and more mental arithmetic (rather than reliance on calculators), while at the same time introducing more whole class teaching.

The Strategy was claimed by government to be based on research on effective Maths teaching. However key reviews of research at the time reported that there was no evidence that whole class teaching or the privileging of basic calculation skills led to higher standards overall (Brown *et al* 1998, 2000). Moreover the 'objectives-based' curriculum model which the NNS employed can be said to be helpful in providing clarity of content and sequencing for teachers, but does not reflect the many complex ways in which children learn, and researchers expressed concern that lack of differentiation in whole-class teaching could interfere with learning. Such a lack has been shown to leave both high and low achievers without appropriate tasks (Brown *et al* 1998: 369). Reporting findings which echo those of Galton *et al* (1999b) among others, reviewed previously, Brown *et al* (1998) state that 'the quality of teacher-pupil interaction [is] a much more important factor than class organisation' (p 371) with respect to attainment. They report that:

Both international and English observational studies ... [agree] on ... the aspects of teacher quality which correlate with attainment ... the use of higher order questions, statements and tasks which require thought rather than practice; emphasis on establishing, through dialogue, meanings and connections between different mathematical ideas and contexts; collaborative problem-solving in class and small group settings; more autonomy for students to develop and discuss their own methods and ideas.

(Brown *et al* 1998: 373).

Even the need for the National Numeracy Strategy has been questioned. Most primary schools already spent an average of an hour a day on Maths (Mullis *et al* 1997: the 'TIMSS' study); and Ruthven (1997) reported in any case that 'the degree of calculator use remains modest in most schools' (p 18). Furthermore Brown *et al* (2000) note that:

The only educational (as opposed to social) factor consistently correlated with test performance is that of 'opportunity to learn'. This means that, unsurprisingly, teaching more mental arithmetic is likely to improve performance in mental arithmetic
(Brown *et al* 2000: 463).

Equally however, teaching more mental arithmetic means teaching *less* of something else, including investigation, application and problem solving; which rather sums up the dilemma of the National Curriculum overall. Extensive research evidence cited above reports initial problems of curriculum overload followed by intense focus on only those core subjects included in National Testing. Such distortion of the curriculum has also been noted by OfSTED's former Chief Inspector, Mike Tomlinson:

In some primary schools the arts, creative and practical subjects are receiving less attention than previously. This risks an unacceptable narrowing of the curriculum ...
(Commentary, OfSTED 2002: 1).

Tomlinson's successor as Chief Inspector, David Bell, similarly reported that:

One of the things inspectors find is that an excessive or myopic focus on targets can actually narrow and reduce achievement by crowding out some of the essentials of effective and broadly-based learning...I have a very real concern that the innovation and reform that we need to see in our schools may be inhibited by an over-concentration on targets.
(Bell 2003).

So what is happening to standards?

The research evidence cited above seems to indicate that the current intense focus on testing and test results in the core subjects of English, Maths and Science is narrowing the curriculum and driving teaching in exactly the opposite direction to that which research indicates will improve learning and attainment. That is, good quality teaching will employ a variety of methods and tasks, including small group work and investigative work, but currently teaching in the upper primary school comprises little more than whole class 'cued elicitation' (Edwards and Mercer 1987) and direct test preparation (cf. also Harlen 2007 and Tymms and Merrell 2007) in this series.

Interestingly, National Curriculum test results would seem to bear out this analysis. While extensive discussion of how 'standards' can be measured over time, and whether or not standards are rising, is beyond the scope of this report (cf. Torrance 2003; Tymms 2004; Tymms and Merrell 2007; Meadows *et al* 2007), a brief review of National Test results at Key Stages 1 and 2 indicates an initial improvement followed by a long plateau, with results still not meeting the government's own targets¹.

While the data have been presented in such a way as to accentuate and hence highlight the trend, clearly, results improved quickly and dramatically, from a relatively low base (especially at Key Stage 2, age 11) but then have largely levelled off since 2000. They have reached a plateau (below the targets that the government set for itself) that not even the NLS and NNS have been able to raise. Indeed, it is interesting to note that at Key Stage 2, results in Science started higher and have remained higher, without the benefit (or hindrance) of a National Science Strategy. Various technical explanations have been advanced as part of the

¹ See Table 1, Figure 1, and Figure 2, below.

explanation for this phenomenon (cf. Tymms 2004) but the most obvious explanation is that teachers were initially unprepared for National Testing, learnt very quickly how to coach for the tests, hence results improved, but any benefit to be squeezed from the system by such coaching has long since been exhausted. Interestingly such an explanation parallels similar research internationally where, for example, Klein *et al* (2000) reviewing state-level results in Texas report 'score inflation and unwanted test preparation' (p 17). Similarly a recently completed study of the implementation of the US *No Child Left Behind* legislation by Rand Education, funded by the US National Science Foundation, reported that:

[...] changes included a narrowing of the curriculum and instruction toward tested topics and even toward certain problems styles or formats. Teachers also reported focusing more on students near the proficient cut-score...

(Hamilton *et al* 2007, Summary: xix).

Similar findings are reported in Harlen (2007: 22) and even reflect research in business management about how innovation initially brings improvement, but tails off, as personnel are de-skilled then re-skilled by change, but then become accustomed to it (Strang and Macy 2001). The key problem with such a phenomenon in education however, is that it is by no means apparent that even such early improvements in scores denote any actual improvements in educational standards. Tymms and Merrell (2007) report on modest improvements in reading and mathematics. Comparative international evidence reviewed by Whetton, Ruddock and Twist (2007) for this series (Primary Review Research Survey 4/2) similarly notes a 'slight improvement' (p 19) in maths and the likelihood of a more substantial improvement in reading. Whetton, Ruddock and Twist (2007) also note good comparative achievement in Science. However the various studies reviewed earlier in this survey would indicate that coaching for the tests has restricted curriculum coverage and the quality of teaching and learning overall, and that as test scores have risen, educational standards, broadly conceived, may actually have declined.

Table 1: Percentage of pupils gaining National Curriculum Assessment Level 2 or above at age 7 (Key Stage 1 (KS1), and Level 4 or above at age 11 Key Stage 2 (KS2)

Date	KS1 : Age 7		KS2 : Age 11		
	English	Maths	English	Maths	Science
1992	77 ²	78			
1995	76	78	48 ³	44	
1996	80	80	58	54	62
2000	81/84 ⁴	90	75	72	85
2002	84/82	90	75	73	86
2003	84/81	90	75	73	87
2004	85/81	90	77	74	86
2005	85/82 ⁵	91	79	75	86
2006			79	75	86

² 1992 is the 'first full run' of KS1 tests.

³ 1995 is the 'first full run' of KS2 tests.

⁴ From 2000, 'Reading' and 'Writing' were reported separately for KS1; the first figure is 'reading'.

⁵ From 2005, KS1 results derive from Teacher Assessments only and cannot any longer be said to be the results of 'National Tests'.

Figure 1:

Percentage of pupils gaining National Curriculum Assessment level 2 or above at age 7

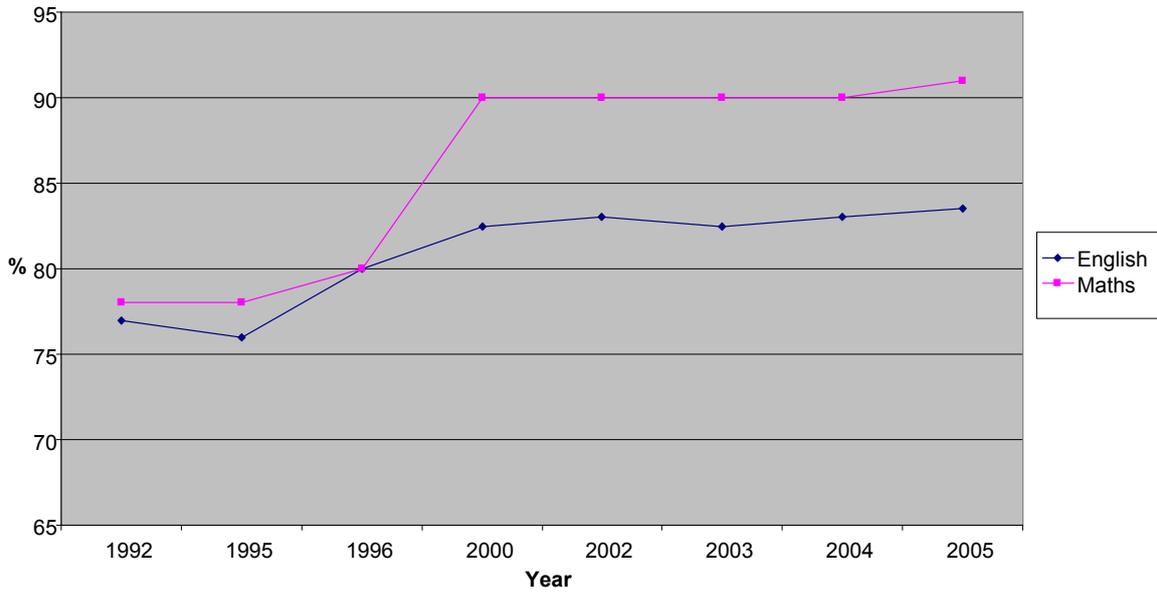
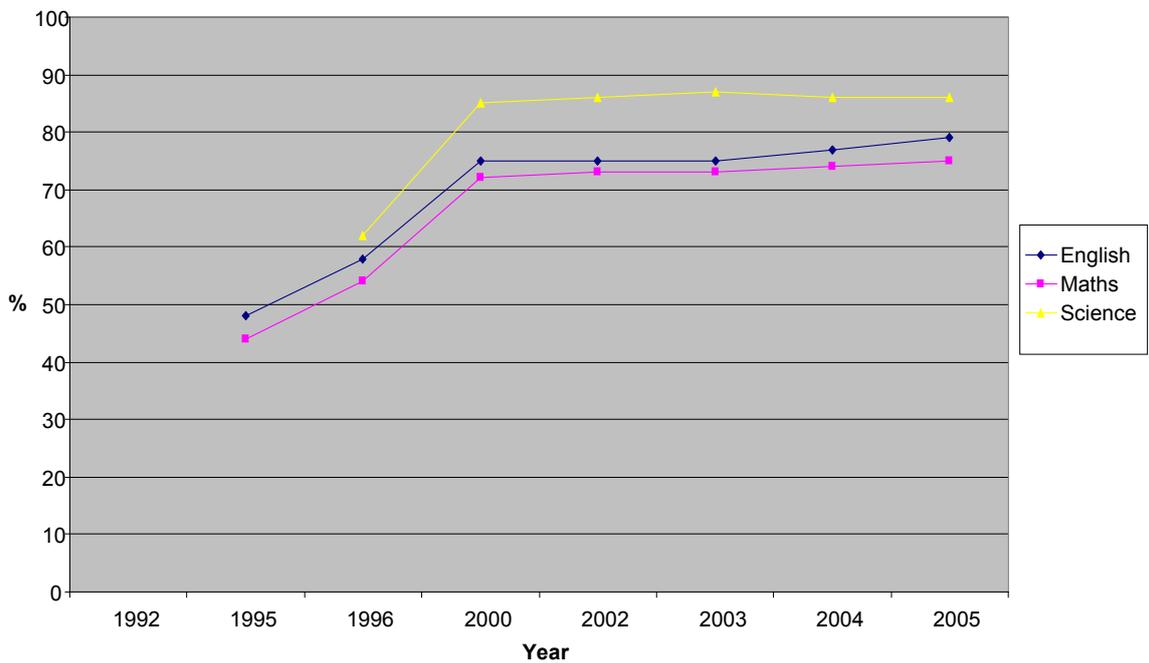


Figure 2:

Percentage of pupils gaining National Curriculum Assessment level 4 or above at age 11



REFERENCES

- Alexander, R.J. (1997) *Policy and practice in primary education: local initiative, national agenda*. London: Routledge.
- Alexander, R.J. (2001) *Culture and pedagogy: international comparisons in primary education*. Oxford: Blackwell.
- Alexander, R.J. (2004) 'Still no pedagogy? Principle, pragmatism and compliance in primary education', *Cambridge Journal of Education* 34(1): 7-33.
- Alexander, R.J., Rose, J. and Woodhead, C. (1992) *Curriculum Organisation and Classroom Practice in Primary Schools: a discussion paper*, London: DES.
- Alexander, R.J., Willcocks, J., and Nelson, N. (1996) 'Discourse, pedagogy and the National Curriculum: change and continuity in primary schools', *Research Papers in Education*, 11(1): 81-120.
- Andrews, R., Torgerson, C., Beverton, S., Locke, T., Low, G., and Robinson, A. (2004) 'The effect of grammar teaching (syntax) in English on 5 to 16 year olds' accuracy and quality in written composition', *Research Evidence in Education Library*. [Available at: <http://eppi.ioe.ac.uk/cms/>. Accessed 5 February 2007]
- Beard, R. (2003) 'Not the whole story of the national literacy strategy: a response to Dominic Wyse'. *British Educational Research Journal* 29(6): 917-929.
- Bell, D. (2003) Speech to the City of York's Annual Education Conference, 28 February 2003.
- Brown, M., Askew, M., Baker, D., Denvir, H. and Millett, A. (1998) 'Is the National Numeracy Strategy Research-Based?', *British Journal of Educational Studies* 46(4): 362-385.
- Brown, M., Millett, A., Bibby, T., and Johnson, D. (2000) 'Turning our attention from the what to the how: the National Numeracy Strategy', *British Educational Research Journal* 26(4): 457-472.
- Boyle, B. and Bragg, J. (2006) 'A curriculum without foundation', *British Educational Research Journal* 32(4): 569-582.
- Central Advisory Council for Education (1967) *Children and their Primary Schools* (The Plowden Report). London: HMSO.
- Croll, P. (1996) *Teachers, Pupils and Primary Schooling: continuity and change*. London: Cassell.
- Daugherty, R. (1995) *National Curriculum Assessment: a review of policy 1987-1994*. London: Falmer Press.
- Dearing, R. (1993) *The National Curriculum and its Assessment: final report*. London: School Curriculum and Assessment Authority.
- Department of Education and Science (DES) / Welsh Office (1987) *The National Curriculum 5 - 16: a consultative document*. London: DES/ Welsh Office.

- Department for Education and Skills (DfES) (2003) *Excellence and enjoyment: a strategy for primary schools*. Suffolk: DfES.
- DfES (2006) *Primary framework for literacy and mathematics*. London: DfES.
- Earl, L., Watson, N., Levin, B., Leithwood, K., Fullan, M., and Torrance, N. (2003). *Watching and learning: Oise/ut evaluation of the implementation of the national literacy and numeracy strategies*. Nottingham: DfES Publications.
- Edwards, D. and Mercer, N. (1987) *Common Knowledge*. London: Methuen.
- Ellis, T., McWhirter, J., McColgan, D. and Haddow, B. (1976) *William Tyndale: the teachers' story*. London: Writers and Readers Publishing Co-operative.
- English, E., Hargreaves, L., and Hislam, J. (2002) 'Pedagogical dilemmas in the national literacy strategy: primary teachers' perceptions, reflections and classroom behaviour', *Cambridge Journal of Education* 32(1): 9-26.
- Galton, M., Simon, B., and Croll, P. (1980) *Inside the Primary Classroom*. London: Routledge and Kegan Paul.
- Galton, M., Hargreaves, L., Comber, C., and Wall, D. (1999a) *Inside the Primary Classroom: 20 years on*. London: Routledge.
- Galton, M., Hargreaves, L., Comber, C., Wall, D. and Pell, T. (1999b) 'Changes in Patterns of Teacher Interaction in Primary Classrooms 1976-1996', *British Educational Research Journal* 25 (1): 23-37.
- Gipps, C., Brown, M., McCallum, B. and McAlister, S. (1995) *Intuition or Evidence? Teachers and national assessment of seven year olds*. Buckingham: Open University Press.
- Hall, K., Collins, J., Benjamin, S., Nind, M. and Sheehy, K. (2004) 'SATurated models of pupildom: assessment and inclusion/exclusion', *British Educational Research Journal* 30(6): 801-818.
- Halsey, A.H., Floud, J. and Anderson, C.A. (Eds.) (1961) *Education, Economy and Society*. New York: Free Press.
- Hamilton, L., et al (2007) *Standards-based Accountability Under No Child Left Behind*. Santa Monica: Rand Education.
- Hardman, F., Smith, F. and Wall, K. (2003) 'Interactive whole class teaching in the National Literacy Strategy', *Cambridge Journal of Education* 33(2): 197-215.
- Harlen, W. (2007) *The Quality of Learning: assessment alternatives for primary education* (Primary Review Research Survey 3/4). Cambridge: University of Cambridge Faculty of Education.
- Harlen, W. and Deakin Crick, R. (2002) 'A systematic review of the impact of summative assessment and tests on students' motivation for learning (EPPI-Centre Review, version 1.1). *Research Evidence in Education Library. Issue 1*. [Available at: <http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=108>. Accessed 9 January 2007].

- Klein, S., et al (2000) 'What do test scores in Texas tell us?' *Education Policy Analysis Archives* 8(49). [Available at: <http://epaa.asu.edu/epaa/v8n49>].
- Levacic, R. and Marsh, A. (2007) 'Secondary modern schools: are their pupils disadvantaged?' *British Educational Research Journal* 33(2): 155-178.
- McNess, E., Triggs, P., Broadfoot, P., Osborn, M. and Pollard, A. (2001) 'The Changing Nature of Assessment in English Primary Schools: findings from the PACE Project 1989-1997', *Education 3-13* 29(3): 9-16.
- Meadows, S., Herrick, D., Filer, A., and the ALSPAC Study Team (2007) 'Improvement in national test reading scores at Key Stage 1: grade inflation of better achievement?' *British Educational Research Journal* 33(1): 47-60.
- Mortimore, P., Sammons, P., Stoll, L., Lewis, D. and Ecob, R. (1988) *School Years: The junior years*. Wells: Open Books Publishing Ltd.
- Mroz, M., Smith, F. and Hardman, F. (2000) 'The discourse of the literacy hour', *Cambridge Journal of Education* 30(3): 380-390.
- Mullis, I., et al (1997) *Mathematics achievement in the primary school years: IEA's Third International Mathematics and Science Study (TIMSS)*. Chestnut Hill, MA: Boston College.
- Office for Standards in Education (OfSTED) (2002) *The National Literacy Strategy: The first four years 1998-2002*. London: OfSTED.
- OfSTED (2005) *The National Literacy and Numeracy Strategies and the Primary Curriculum*. London: OfSTED.
- Osborn, M., McNess, E. and Broadfoot, P. (2000) *What Teachers Do: changing policy and practice in primary education*. London: Continuum.
- Parker, M. and Hurry, J. (2007) 'Teachers' use of questioning and modelling comprehension skills in primary classrooms', *Educational Review* 59(3): 299-314.
- Pollard, A. and Triggs, P. (2000) *What Pupils Say: changing policy and practice in primary education*. London: Continuum.
- Pollard, A., Broadfoot, P., Croll, P., Osborn, M. and Abbott, D. (1994) *Changing English Primary Schools? The impact of the Education Reform Act at Key Stage 1*. London: Cassell
- Reay, D. (2006) "'I'm not seen as one of the clever children": consulting primary school pupils about the social conditions of learning', *Educational Review* 58(2): 171- 181.
- Pryor, J. and Torrance, H. (2000) 'Questioning the Three Bears. The social construction of the classroom', in A. Filer (Ed) *Assessment: social practice and social product*. London: RoutledgeFalmer.
- Reay, D. and Wiliam, D. (1999) "'I'll be a nothing": structure, agency and the construction of identity through assessment', *British Educational Research Journal* 25(3): 343-354.

- Ruthven, K. (1997) *The Use of Calculators at Key Stages 1-3*. London: School Curriculum and Assessment Authority.
- Skidmore, D., Perez-Parent, M. and Arnfield, D. (2003) 'Teacher-pupil dialogue in the guided reading session', *Reading Literacy and Language* 37(2): 47-53.
- Stannard, J. and Huxford, L. (2007) *The Literacy Game: the story of the National Literacy Strategy*. London: Routledge.
- Strang, D. and Macy, M. (2001) 'In Search of Excellence: fads, success stories, and adaptive emulation', *American Journal of Sociology* 107(1): 147-182.
- Teddle, C. and Reynolds, D. (Eds.) (2000) *The International Handbook of School Effectiveness Research*. London: Routledge.
- Torrance, H. (2003) 'Assessment of the National Curriculum in England', in T. Kellaghan and D. Stufflebeam (Eds.) *International Handbook of Educational Evaluation*. Dordrecht: Kluwer.
- Torrance, H. (1995) (Ed.) *Evaluating Authentic Assessment*. Buckingham: Open University Press.
- Torrance, H. and Pryor, J. (1998) *Investigating Formative Assessment: teaching learning and assessment in the classroom*. Buckingham: Open University Press.
- Torrance, H. and Pryor, J. (2001) 'Developing Formative Assessment in the Classroom: using action research to explore and modify theory', *British Educational Research Journal* 27(5): 615-631.
- Torrance, H. and Pryor, J. (2003) 'Investigating Formative Classroom Assessment', in L. Poulson and M. Wallace (Eds.) *Learning to Read Critically in Teaching and Learning*. London: Sage.
- Tymms, P. (2004) 'Are standards rising in English primary schools?' *British Educational Research Journal* 30(4): 477-494.
- Tymms, P. and Merrell, C. (2007) *Standards and Quality in English Primary Schools Over Time: the national evidence* (Primary Review Research Survey 4/1), Cambridge: University of Cambridge Faculty of Education.
- Webb, R. (1993) *Eating the Elephant Bit by Bit: the National Curriculum at Key Stage 2*. London: Association of Teachers and Lecturers.
- Webb, R., and Vulliamy, G. (2006) *Coming Full Circle? The impact of new labour's education policies on primary school teachers' work*. London: The Association of Teachers and Lecturers.
- Whetton, C., Ruddock, G. and Twist, L. (2007) *Standards in English Primary Education: the international evidence* (Primary Review Research Survey 4/2), Cambridge: University of Cambridge Faculty of Education.

- Wyse, D. (2000) 'Phonics - the whole story?: A critical review of empirical evidence', *Educational Studies* 26(3): 355-364.
- Wyse, D. (2001) 'Grammar. For Writing?: a critical review of empirical evidence', *British Journal of Educational Studies* 49(4): 411-427.
- Wyse, D. (2003) 'The National Literacy Strategy: a critical review of empirical evidence', *British Educational Research Journal* 29(6): 903-916.
- Wyse, D. (2006) 'Pupils' word choices and the teaching of grammar', *Cambridge Journal of Education* 36(1): 31-47.
- Wyse, D. and Jones, R. (2001) *Teaching English, Language and Literacy*. London: Routledge Falmer.
- Wyse, D., and Jones, R. (2008) *Teaching English, language and literacy* (2nd ed). London: Routledge.
- Wyse, D., and Styles, M. (2007) 'Synthetic phonics and the teaching of reading: the debate surrounding England's "Rose Report"', *Literacy* 47(1): 35-42.
- Yates, A. and Pidgeon, D.A. (1957) *Admission to Grammar Schools*. London: Newnes.

APPENDIX 1

THE PRIMARY REVIEW PERSPECTIVES, THEMES AND SUB THEMES

The Primary Review's enquiries are framed by three broad perspectives, the third of which, primary education, breaks down into ten themes and 23 sub-themes. Each of the latter then generates a number of questions. The full framework of review perspectives, themes and questions is at www.primaryreview.org.uk

The Review Perspectives

- P1 Children and childhood
- P2 Culture, society and the global context
- P3 Primary education

The Review Themes and Sub-themes

- T1 Purposes and values**
 - T1a Values, beliefs and principles
 - T1b Aims
- T2 Learning and teaching**
 - T2a Children's development and learning
 - T2b Teaching
- T3 Curriculum and assessment**
 - T3a Curriculum
 - T3b Assessment
- T4 Quality and standards**
 - T4a Standards
 - T4b Quality assurance and inspection
- T5 Diversity and inclusion**
 - T5a Culture, gender, race, faith
 - T5b Special educational needs
- T6 Settings and professionals**
 - T6a Buildings and resources
 - T6b Teacher supply, training, deployment & development
 - T6c Other professionals
 - T6d School organisation, management & leadership
 - T6e School culture and ethos
- T7 Parenting, caring and educating**
 - T7a Parents and carers
 - T7b Home and school
- T8 Beyond the school**
 - T8a Children's lives beyond the school
 - T8b Schools and other agencies
- T9 Structures and phases**
 - T9a Within-school structures, stages, classes & groups
 - T9b System-level structures, phases & transitions
- T10 Funding and governance**
 - T10a Funding
 - T10b Governance

APPENDIX 2

THE EVIDENTIAL BASIS OF THE PRIMARY REVIEW

The Review has four evidential strands. These seek to balance opinion seeking with empirical data; non-interactive expressions of opinion with face-to-face discussion; official data with independent research; and material from England with that from other parts of the UK and from international sources. This enquiry, unlike some of its predecessors, looks outwards from primary schools to the wider society, and makes full though judicious use of international data and ideas from other countries.

Submissions

Following the convention in enquiries of this kind, submissions have been invited from all who wish to contribute. By June 2007, nearly 550 submissions had been received and more were arriving daily. The submissions range from brief single-issue expressions of opinion to substantial documents covering several or all of the themes and comprising both detailed evidence and recommendations for the future. A report on the submissions will be published in late 2007.

Soundings

This strand has two parts. The *Community Soundings* are a series of nine regionally based one to two day events, each comprising a sequence of meetings with representatives from schools and the communities they serve. The Community Soundings took place between January and March 2007, and entailed 87 witness sessions with groups of pupils, parents, governors, teachers, teaching assistants and heads, and with educational and community representatives from the areas in which the soundings took place. In all, there were over 700 witnesses. The *National Soundings* are a programme of more formal meetings with national organisations both inside and outside education. National Soundings A are for representatives of non-statutory national organisations, and they focus on educational policy. National Soundings B are for outstanding school practitioners; they focus on school and classroom practice. National Soundings C are variably-structured meetings with statutory and other bodies. National Soundings A and B will take place between January and March 2008. National Soundings C are outlined at 'other meetings' below.

Surveys

30 surveys of published research relating to the Review's ten themes have been commissioned from 70 academic consultants in universities in Britain and other countries. The surveys relate closely to the ten Review themes and the complete list appears in Appendix 3. Taken together, they will provide the most comprehensive review of research relating to primary education yet undertaken. They are being published in thematic groups from October 2007 onwards.

Searches

With the co-operation of DfES/DCSF, QCA, Ofsted, TDA and OECD, the Review is re-assessing a range of official data bearing on the primary phase. This will provide the necessary demographic, financial and statistical background to the Review and an important resource for its later consideration of policy options.

Other meetings (now designated National Soundings C)

In addition to the formal evidence-gathering procedures, the Review team meets members of various national bodies for the exchange of information and ideas: government and opposition representatives; officials at DfES/DCSF, QCA, Ofsted, TDA, GTC, NCSL and IRU; representatives of the teaching unions; and umbrella groups representing organisations involved in early years, primary education and teacher education. The first of three sessions with the House of Commons Education and Skills Committee took place in March 2007. Following the replacement of DfES by two separate departments, DCSF and DIUS, it is anticipated that there will be further meetings with this committee's successor.

APPENDIX 3

THE PRIMARY REVIEW INTERIM REPORTS

The interim reports, which are being released in stages from October 2007, include the 30 research surveys commissioned from external consultants together with reports on the Review's two main consultation exercises: the community soundings (87 witness sessions with teachers, heads, parents, children and a wide range of community representatives, held in different parts of the country during 2007) and the submissions received from large numbers of organisations and individuals in response to the invitation issued when the Review was launched in October 2006.

The list below starts with the community soundings and submissions reports written by the Review team. Then follow the 30 research surveys commissioned from the Review's consultants. They are arranged by Review theme, not by the order of their publication. Report titles may be subject to minor amendment.

Once published, each interim report, together with a briefing summarising its findings, may be downloaded from the Review website, www.primaryreview.org.uk.

REPORTS ON PUBLIC CONSULTATIONS

1. *Community soundings: the Primary Review regional witness sessions* (Robin Alexander and Linda Hargreaves)
2. *Submissions received by the Primary Review*

PURPOSES AND VALUES

3. *Aims as policy in English primary education*. Research survey 1/1 (John White)
4. *Aims and values in primary education: England and other countries*. Research survey 1/2 (Maha Shuayb and Sharon O'Donnell)
5. *Aims for primary education: the changing national context*. Research survey 1/3 (Stephen Machin and Sandra McNally)
6. *Aims for primary education: changing global contexts*. Research survey 1/4 (Hugh Lauder, John Lowe and Rita Chawla-Duggan)

LEARNING AND TEACHING

7. *Children's cognitive development and learning*. Research survey 2/1a (Usha Goswami and Peter Bryant)
8. *Children's social development, peer interaction and classroom*. Research survey 2/1b (Christine Howe and Neil Mercer)
9. *Teaching in primary schools*. Research survey 2/2 (Robin Alexander and Maurice Galton)
10. *Learning and teaching in primary schools: the curriculum dimension*. Research survey 2/3 (Bob McCormick and Bob Moon)
11. *Learning and teaching in primary schools: evidence from TLRP*. Research survey 2/4 (Mary James and Andrew Pollard)

CURRICULUM AND ASSESSMENT

12. *Primary curriculum and assessment: England and other countries*. Research survey 3/1 (Kathy Hall and Kamil Özerk)
13. *The trajectory and impact of national reform: curriculum and assessment in English primary schools*. Research survey 3/2 (Dominic Wyse, Harry Torrance and Elaine McCreery)
14. *Primary curriculum futures*. Research survey 3/3 (James Conroy, Moira Hulme and Ian Menter)
15. *Assessment alternatives for primary education*. Research survey 3/4 (Wynne Harlen)

QUALITY AND STANDARDS

16. *Standards and quality in English primary schools over time: the national evidence*. Research survey 4/1 (Peter Tymms and Christine Merrell)
17. *Standards in English primary education: the international evidence*. Research survey 4/2 (Chris Whetton, Graham Ruddock and Liz Twist)
18. *Quality assurance in English primary education*. Research survey 4/3 (Peter Cunningham and Philip Raymont)

DIVERSITY AND INCLUSION

19. *Children in primary education: demography, culture, diversity and inclusion*. Research survey 5/1 (Mel Ainscow, Jean Conteh, Alan Dyson and Frances Gallanaugh)
20. *Learning needs and difficulties among children of primary school age: definition, identification, provision and issues*. Research survey 5/2 (Harry Daniels and Jill Porter)
21. *Children and their primary schools: pupils' voices*. Research survey 5/3 (Carol Robinson and Michael Fielding)

SETTINGS AND PROFESSIONALS

22. *Primary education: the physical environment*. Research survey 6/1 (Karl Wall, Julie Dockrell and Nick Peacey)
23. *Primary education: the professional environment*. Research survey 6/2 (Ian Stronach, Andy Pickard and Elizabeth Jones)
24. *Teachers and other professionals: training, induction and development*. Research survey 6/3 (Olwen McNamara, Rosemary Webb and Mark Brundrett)
25. *Teachers and other professionals: workforce management and reform*. Research survey 6/4 (Hilary Burgess)

PARENTING, CARING AND EDUCATING

26. *Parenting, caring and educating*. Research survey 7/1 (Yolande Muschamp, Felicity Wikeley, Tess Ridge and Maria Balarin)

BEYOND THE SCHOOL

27. *Children's lives outside school and their educational impact*. Research survey 8/1 (Berry Mayall)
28. *Primary schools and other agencies*. Research survey 8/2 (Ian Barron, Rachel Holmes, Maggie MacLure and Katherine Runswick-Cole)

STRUCTURES AND PHASES

29. *The structure of primary education: England and other countries*. Research survey 9/1 (Anna Riggall and Caroline Sharp)
30. *Organising learning and teaching in primary schools: structure, grouping and transition*. Research survey 9/2 (Peter Blatchford, Judith Ireson, Susan Hallam, Peter Kutnick and Andrea Creech)

FUNDING AND GOVERNANCE

31. *The funding of English primary education*. Research survey 10/1 (Philip Noden and Anne West)
32. *The governance and administration of English primary education*. Research survey 10/2 (Maria Balarin and Hugh Lauder).



... children, their world, their education

The Primary Review is a wide-ranging independent enquiry into the condition and future of primary education in England. It is supported by Esmée Fairbairn Foundation, based at the University of Cambridge and directed by Robin Alexander. The Review was launched in October 2006 and aims to publish its final report in autumn 2008.

FURTHER INFORMATION

www.primaryreview.org.uk

General enquiries: enquiries@primaryreview.org.uk

Media enquiries: richard@margrave.co.uk

Published by the Primary Review,
Faculty of Education, University of Cambridge
184 Hills Road, Cambridge, CB2 8PQ, UK

ISBN 978-1-906478-22-3

Copyright © University of Cambridge 2008