an investigation into gender differences in achievement

Phase 1: a review of recent research and LEA information on provision

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1. INTRODUCTION

1.1 The purpose of the project

In the past few years, there has been increasing concern about boys' relatively poor levels of achievement in comparison with girls. This concern has been fuelled by much media attention and speculation through headlines such as 'Girls outclassing boys' (Guardian, 26 November 1997), 'School is not good for boys' (TES, 30 October 1998), 'Failing boys "public burden number one"' (TES, 27 November 1998) and 'Gender gap widens to a gulf' (TES, 29 January 1999). This has led to a wave of research which has explored three main areas: the extent of gender differences in achievement, explanations for its existence and, on the basis of these findings, the types of initiatives that schools can adopt in order to address this discrepancy.

However, there has been little research, as yet, into the level of take-up of different strategies, the rationale behind the adoption of specific strategies, how various strategies have been implemented, and the extent to which the strategies have addressed gender differences in achievement.

This report refers to research that has been carried out elsewhere and to a project currently taking place at the National Foundation for Educational Research (NFER), which forms part of the research programme funded by the Local Government Association. The NFER project aims to:

♦ explore the range of strategies currently operating in schools to address gender differences in achievement;

♦ identify examples of 'good practice' in this area;

♦ investigate the rationale behind schools' adoption of strategies, the way in which strategies have been implemented, and the extent to which the strategies have addressed gender differences in achievement;

♦ analyse the perceived impact that these approaches have had on schools, teachers and pupils; and

♦ produce a report that will assist schools wishing to adopt similar strategies.

In order to achieve these aims, a two-phase approach was adopted. Phase 1 of the project, which represents the focus of this report, took place between August 1998 and December 1998. Its main purpose was:

♦ to gain an overview of the main issues regarding gender differences in achievement through a review of the relevant research literature; and

♦ to gain some insight into how staff in schools were currently responding to the issue of gender differences in achievement.

In contrast, the main purpose of Phase 2 of the study, which began in January 1999 and which is due to end in June 1999, was to use a number of case studies to investigate the ways in which particular types of strategies had been implemented and to assess how effectively they had addressed gender differences in achievement (for further details see Section 3.4).

1.2 The purpose of this report

It was decided to write and publish this report on Phase 1 of the study because of the high level of interest that currently surrounds the issue of gender differences in achievement. It was hoped that LEA advisers, practitioners and others would find both the overview of recent research into gender differences, and the general findings on what schools are currently doing to address various aspects of gender differences in achievement, interesting and useful.

It is envisaged that Phase 2 of the study will result in a further report, which will draw on the findings from the case studies in order to describe the implementation and efficacy of particular strategies that schools have adopted to address gender differences in achievement.

1.3 Methodological considerations

Since the 1970s, there has been a great deal of research into the topic of gender differences in achievement and it was decided that a review would be carried out of *recent* research that was directly relevant to this project in order to gain an overview of the main issues.

In addition, in an attempt to gain some insight into how schools were responding to the issue of gender differences in achievement, a pro forma was sent to all local education authorities (LEAs) in England and Wales requesting:

(1)   information about the strategies schools were currently using to address gender differences in achievement; and

(2)   nominations of schools that had initiatives in place which LEAs regarded as examples of 'good practice'.

The information that LEAs provided on the pro formas was analysed to find out what strategies schools were adopting and for what general purposes. It is important to note that the main purpose of the pro forma was to obtain, from LEAs, nominations of schools that had strategies in place representing examples of good practice. The findings from the analysis should therefore not be perceived as representing a comprehensive survey of how many schools were addressing the issue of gender differences and details of the different strategies being implemented.

The findings from the analysis of the pro forma, along with the information obtained from the general review of recent literature, were used in Phase 2 of the study to establish a set of criteria by which to choose case study schools for participation.

1.4 Definitions and key points

Throughout this report an explicit distinction has been made between the use of the words 'achievement' and 'attainment'. 'Achievement' has been used to describe progress made by pupils in the broadest sense whilst 'attainment' has been used to define gains made by pupils specifically in terms of test/examination results.

In addition, care has been taken to avoid using language that may suggest that *all* boys or *all* girls can be deemed to behave in an identical fashion.

Finally, it is also useful to recognise that research into gender differences in achievement tends to focus on trends, in order to make generalisations. However, differences at both the school level (in terms of subject areas, assessment techniques, pupil groupings, teaching methods, school ethos), and at the individual pupil level (in terms of a pupil's social background, race and personal attributes), are likely to influence and complexify the size and nature of gender differences in performance. Therefore, while generalisations about gender differences may be true at the aggregate level, they may actually be untrue or unhelpful at the individual pupil level (Arnold, 1997). It is thus unsurprising to note that the findings from studies into the causes of gender differences in achievement generally reveal that there are neither simple explanations nor 'quick-fix-solutions' for gender gaps in performance.

1.5 Report structure

This report begins by presenting an overview of the recent literature on gender differences in achievement (Chapter 2). This chapter explores the extent of the 'gender gap', the range of explanations for its existence and the different types of strategies that can be used to address this gap. Chapter 3 then presents and discusses the results of the analysis of the pro forma in terms of the strategies being adopted to address gender differences in achievement. The chapter concludes by describing how these findings were used to inform Phase 2 of the project and by outlining the plans for this second phase.

2. A REVIEW OF RECENT LITERATURE ON GENDER DIFFERENCES IN ACHIEVEMENT

The main aim of this chapter is to provide an overview of the dominant issues surrounding gender differences in achievement. Given the aims and scope of this project, it was decided to focus predominantly on research that had been completed recently and that was directly relevant to this project.

Over the last 30 years, there have been two distinct movements within research on gender differences in educational achievement. From the late 1970s and throughout the 1980s, the main focus was on girls' lower levels of achievement in comparison with boys. However, since the end of the 1980s, to the present day, the emphasis has shifted significantly towards concerns with boys' levels of achievement in comparison with girls.

This overview of the recent research literature will highlight the three main areas that have been explored:

♦ the extent of gender differences in achievement;

♦ explanations for the existence of these differences; and

♦ the different types of strategies which have been proposed to address them.

2.1 The extent of gender differences

Research in this area has generally focused on variations in terms of levels of attainment and differences in subject preferences for boys and girls. Some of this research has also highlighted the importance of understanding these differences in relation to changes in attainment levels over time, pupils' multiple identities in terms of class and race, and variations in the level of public interest in gender differences in attainment.

2.1.1 Gender differences in levels of attainment

Within the last 20–25 years, there have been three significant shifts in the pattern of girls' and boys' levels of examination performance (Arnot *et al.*, 1998). Between 1975 and 1987, reflecting the increasing impact of equal opportunities policies, there was a period of stability in which roughly similar proportions of boys and girls obtained five O-level passes. However, during this period, despite some statistical difficulties with analysing O-level and CSE results, there is evidence to indicate that the overall performance of girls was beginning to improve at a greater rate than that of boys (OFSTED and EOC, 1996).

Between 1988 and 1990, following the introduction of the National Curriculum and GCSEs, the proportion of girls achieving five A–C grades increased rapidly. Evidence shows that girls outperformed boys in virtually all subjects (Warrington and Younger, 1997; Gallagher, 1997; OFSTED and EOC, 1996), and at each key stage (OFSTED and EOC, 1996), although the extent of the 'gender gap' varied according to key stages, GCSEs, subject areas, ability levels and levels of qualification (Arnold, 1997). For example, research by Arnot et al. (1998) into variations in levels of attainment in the core subjects reveals that girls get off to a better start in reading at KS1 and maintain their lead at KS2 and KS3. In mathematics, boys and girls perform at similar levels at KS1–3, and in science, after starting at similar levels, boys pull ahead of girls during KS2.

Since 1990, there has been another period of stability during which girls have maintained their distinct advantage in attainment levels. Arnot et al., (1998) suggest that there are three main areas where gender gaps are prominent:

- early literacy skills and later on in English, where generally girls outperform boys;

- GCSE exams, where girls make better progress overall between 11–16; and

- post-16, where girls generally continue to opt out of maths and science in later years.

OFSTED inspections (OFSTED and EOC, 1996) found that half of primary schools, a third of middle schools and a fifth of secondary schools were successful in providing equal opportunities for boys and girls. Those schools that were successful were characterised by a headteacher with a strong commitment to developing equal opportunities initiatives and by having systems in place to investigate gender differences. In comparison, those schools that were not successful in providing equal opportunities were characterised by their inability to take account of gender issues in resources and school policies. Interestingly, however, differences in the overall performance levels between boys and girls in mixed schools appeared greater in schools that were successful in providing equal opportunities than in those schools that were not successful. Reasons for this discrepancy were not discussed in the report.

The OFSTED report (OFSTED and EOC, 1996) also noted that although comparisons between single-sex and mixed schools are complex, girls' schools tend to have the highest levels of performance, followed by mixed schools and then boys' schools. However, the report stated that levels of performance tended notably to relate to the socio-economic context of the school and the ability profiles of the pupils.

At A-level, differences in attainment between males and females are difficult to ascertain. However, there is some evidence (OFSTED and EOC, 1996; Warrington and Younger, 1997; Gallagher, 1997; Arnot et al., 1998; Bleach,

1998a) to suggest that since 1995 there has been a virtual elimination of the gap in *overall* performance in A/AS-levels, where boys traditionally surpassed girls. Interestingly, of those *less* qualified at GCSE, there is no significant difference between the genders in terms of subsequent A-level achievement. In contrast, of those *well* qualified at GCSE, boys tend to make greater progress than girls at A-level.

2.1.2 Gender differences in subject preferences

Research shows that differences in subject preferences both prior to GCSEs and post-16 continue to follow traditional gendered lines. Boys generally prefer to study science, mathematics, information and communication technology and physical education; whilst girls usually prefer to study English, humanities and music (Gallagher, 1997; OFSTED and EOC, 1996; Arnot *et al.*, 1998; Bleach, 1998b). These gendered preferences are also reflected in patterns of entry at both A-level and for subjects studied for vocational qualifications. Among the 16–19 age group, women tend to opt for business and commerce, hairdressing and beauty, and caring; while men typically opt for engineering, construction and mainstream science (Arnot *et al.*, 1998).

Although there is some evidence to show that, in general, girls are increasingly more prepared to tackle traditional male subjects, many boys still appear reluctant to tackle traditional girls' subjects (OFSTED and EOC, 1996; Arnot *et al.*, 1998) (see Section 2.2.2).

2.1.3 Understanding the extent of gender differences

Against the background of this general picture, it is important to recognise that, overall, both boys' and girls' levels of attainment have consistently increased over time (Gallagher, 1997). In addition, there is currently more similarity between the attainment of boys and girls than there is difference – although there are significant differences in terms of subject areas and levels of qualification (Arnot *et al.*, 1998; Epstein *et al.*, 1998; Bleach, 1998a). Therefore, contrary to much of the recent media speculation, boys are not attaining less than in the past; girls have just increased their levels of attainment at a faster rate over the last 10 – 20 years (Bray *et al.*, 1997; Warrington and Younger, 1997; Gallagher, 1997; Bleach, 1998a). Summarising, Gallagher (1997) states:

> [it is] *important to emphasise the extent to which current debates are set within a context where educational achievement levels generally have been increasing ... evidence suggests that boys represent an increasing extent of a decreasing problem.* (p. 40)

On a methodological level it should also be noted that comparisons of boys' and girls' performance generally compare different cohorts as there is currently little longitudinal data, and they should therefore be viewed with a certain degree of caution (Arnot *et al.*, 1998).

Taking a slightly different perspective, researchers such as Riddell (1998) and Turner *et al.* (1995) have claimed that although gender is a key factor influencing educational performance,

> [social] *class and the associated level of education of parents (for both boys and girls) continue to be the most reliable predictors of a child's success in school examinations.*
>
> (Epstein *et al.*, 1998, p.11)

A number of researchers (MacDonald *et al.*, 1999; Arnot *et al.*, 1998; Raphael Reed, 1998; Bleach, 1998a; Powney, 1996) have also argued that gender differences in attainment can only be properly understood in relation to social class and race. For example, Arnot *et al.*, (1998) reveal that, overall, while white girls are outperforming white boys from the professional and intermediate classes, Asian and African-Caribbean boys from these classes are outperforming their female counterparts. The general outperformance by girls of boys for pupils of all races is only consistent for those pupils from working-class backgrounds. However, it has been argued (Gillborn and Gipps, 1996) that the current data on the intersection of class, gender and race on national patterns of attainment remains highly dubious, 'concealing sound markers of social differentiation and undermining the apparent validity of a more radical critique of gender performance in specific social contexts' (Raphael Reed, 1998, p. 57).

Both these arguments suggest that while there is a gender effect on pupil attainment, it may be significantly less important than the effect of other/ multiple social factors (Epstein *et al.*, 1998).

2.1.4 Understanding current interest in boys' achievement

The current obsession in Britain with pupil achievement can be linked to the UK's preoccupation, over the last decade, with increasing the competitiveness of the national economy and the accompanying shift towards a market-led education system. Mahony (1998) argues that this has meant that the language of equal opportunities, with its emphasis on social justice and inequality, has been replaced with the language of school effectiveness, standards and performance. In addition, Mahony claims that the move towards a market-led education system has resulted in a narrowing of the definition of achievement to subject knowledge, literacy and numeracy, and has increased pressure on schools to pour resources into supporting those pupils who underachieve, according to this definition. Summarising, Mahony (op.cit.) states:

> *in a context of competition between schools for students, academic achievement becomes highly visible and even heightened through such mechanisms as parental choice and 'measures' of individual teacher effectivity while explanations of, and solutions to, underachievement proliferate. Individual students or groups of students (such as boys) thus become crucial in determining the overall academic performance of schools.* (p. 41)

These changes in educational policy have had the effect of placing not only pupil achievement into the consciousness of the general public, but also gender differences in achievement and thus girls' overall outperformance of boys. In addition, media attention and speculation have fuelled public interest and concern over this issue.

In fact, Cohen (1998) points out that, in general, boys have been underachieving for centuries (Schools Inquiry Commission, 1868; Board of Education, 1923). For example, during the period when selection was used in Britain, it was not unusual for LEAs to have quotas for the numbers of boys and girls who could pass the 11+. The main justification for this policy was that, overall, boys performed less well than girls at age 11, because of their slower maturation rate. Therefore, to treat boys and girls as a single group would discriminate against boys, and since boys, in general, went on to outperform girls at O-level, A-level and in university admissions, this policy appeared justifiable (Gallagher, 1997; Bleach, 1998b).

However, Cohen (1998) claims that the overall underachievement of boys has never been properly addressed. She suggests that this is because boys' *achievement* has always been attributed to *internal* attributes (e.g. innate intelligence) and their *failure,* to *external* factors (e.g. teaching methods). Whilst girls' *achievement* has generally been attributed to *external* factors and their *failure*, to *internal* factors.

Cohen goes on to argue that by attributing boys' *failure*, to *external* factors, such as teaching methods, it has made it possible to explain away their failure. However, by attributing girls' *success* to such factors, it has fostered the argument that it is possible to increase boys' achievement by changing external factors. These assumptions, combined with the current, overall, outperformance of boys by girls, can arguably be said to provide the drive for the current preoccupation with boys' levels of achievement.

In summary, therefore, it appears that the current focus on boys' achievement has evolved as a result of:

1. the move towards a market-led education system which emphasises the importance of performance; and

2. the currently explicit outperformance of boys by girls set within a traditional achievement discourse that attributes girls' *achievement*, and boys' *underachievement*, to external (and thus changeable) factors.

The further interest in the underachievement of working-class, white boys can be attributed to their considerable number and their relatively low levels of performance in comparison with other groups of boys, (Arnot *et al.*, 1998).

2.2 Explaining gender differences in attainment

The findings from the literature on reasons for gender differences in attainment can be divided into two main strands. The first refers to school-related factors, which explore changes in curriculum content and assessment procedures, teacher–pupil relations, pupil subcultures, and pupil attitudes and behaviour. The second strand refers to out-of-school factors which investigate biological explanations, the process of socialisation and the effect of social change in late twentieth century Britain. Both strands of research are summarised below.

School-related factors

2.2.1 Curriculum content and assessment procedures

It has been widely argued that recent changes in the curriculum and in modes of assessment can provide some explanation for girls' general outperformance of boys over the last decade. The introduction of the National Curriculum meant that for the first time, regardless of pupils' subject preferences, all pupils had to study the same core subjects. A higher number of pupils were entered for examinations as they all studied courses which led to GCSEs. This resulted in a decrease in the gender 'entry gap' overall and in most subjects (Arnot et al., 1998) and enabled girls to compete with boys in subjects which had previously given boys, in general, an advantage into higher education and the workplace (Warrington and Younger, 1997; Pickering, 1997).

There is a considerable amount of research (Bleach, 1998b; Murphy and Elwood, 1996; OFSTED and EOC, 1996; Arnot et al., 1998) which reveals that, overall, boys and girls interact with curriculum content differently and favour different styles of response which reflect their reading and writing preferences. For example, in general, girls' tastes in reading include a lot of fiction, which influences their learning and response styles (Bleach, 1998b). Their preferred style of written response tends to be extended, reflective composition, and they are therefore often more successful in reflective aspects of their work such as applying mathematics (Murphy and Elwood, 1996; OFSTED and EOC, 1996). They tend to do better on sustained tasks that are open-ended, process-based and related to realistic situations (Arnot et al., 1998).

In contrast, boys generally have narrower experiences of fiction (Bleach, 1998b). Their preferred style of written response tends to be episodic, factual and commentative (Murphy and Elwood, 1996). Boys generally prefer memorising abstract, unambiguous facts and are often willing to sacrifice deep understanding for correct answers achieved at speed. They also tend to perform significantly better on multiple-choice tests (Arnot et al., 1998; Bleach, 1998b). Their learning usually improves when they become convinced of the value in what they are doing (OFSTED and EOC, 1996).

Researchers (Murphy and Elwood, 1998, 1996; Gallagher, 1997; Arnot *et al.*, 1998; Bleach, 1998b) have argued that girls' and boys' generally distinct styles of response, and preferences and skills in writing reflect the imbalance in their exposure to different types of reading materials which can be associated with the different ways in which they are socialised (see Section 2.2.5). These variations in styles of response can then account, to some extent, for differences in assessment outcomes.

The introduction of GCSEs and G/NVQs led to a shift from an emphasis on learning in terms of the acquisition of knowledge towards an emphasis on the process of learning (Arnot *et al.*, 1998). As a result, terminal examinations counted for less, and more marks were given for the ability to be analytical rather than speculative (Warrington and Younger, 1997; Pickering, 1997). It has been argued that this increased element of continuous learning favoured the more sequential learning of girls (Warrington and Younger, 1997; Pickering, 1997; Arnold, 1997; Bleach, 1998b; MacDonald *et al.*, 1998). This is compounded by the fact that 'certain styles of expression are expected in particular subject areas and influence teachers' judgements of students' ability often in ways that misrepresent students' real achievements' (Murphy and Elwood, 1998, p.175). Substantiating this claim, Murphy and Elwood (1998) found that there was consistency between the different forms of responses which males and females generally considered appropriate and their levels of performance in different subjects, depending on the style of expression that was expected.

However, it is interesting to note that the changes in the criteria for GCSEs in 1993–94, which reduced the amount of coursework that was required, did not immediately reduce the overall superiority of girls' performance (OFSTED and EOC, 1996). Therefore, although some evidence shows that girls, in general, do slightly better on the coursework elements of assessment, this may only marginally affect pupils' overall results (Arnot *et al.*, 1998). Furthermore, evidence has also revealed that, in general, girls outperform boys in both coursework and exams (NEAB, 1996).

In contrast, it has been argued that at A-level the flair, confidence and risk-taking demonstrated generally by boys is more advantageous than the sustained good work and good organisation used to positive effect by many girls at GCSE (Bleach, 1998a), and may account for the cross-over in performance post-16 (Elwood and Comber, 1996). It is thus possible to associate the change in post-16 performance patterns also with the relationship between pupils' preferred style of response and levels of attainment (Murphy and Elwood, 1998).

2.2.2 Relations in schools

Teachers' gender values, expectations of, and behaviour towards, boys and girls have also been found to play an important role in shaping pupils' perceptions of, and reactions to, school (Arnot *et al.*, 1998; MacDonald *et al.*, 1998).

Research has shown that, in general, boys are more likely than girls to explicitly challenge the authority of the teacher (Warrington and Younger, 1997). In addition, because boys' contributions tend to be physically and verbally more prominent, they more frequently have their contributions evaluated by teachers and peers – both positively and negatively (Arnot *et al.*, 1998). Furthermore, Warrington and Younger (1997) found that boys generally feel they receive less support, encouragement and guidance from teachers and that teachers have higher expectations of girls. Teachers are thus seen as more hostile towards boys (i.e. 'pick on' boys) by all children (Warrington and Younger, 1997; Pickering, 1997), which can have detrimental effects on the attitudes of some boys and can contribute to boys switching off and dropping out. Interestingly, few teachers acknowledge the possibility that they treat girls and boys differently in the classroom (Warrington and Younger, 1997; Pickering, 1997).

Research (Bray *et al.*, 1997; Pickering, 1997; Gallagher, 1997) suggests that, in general, there is an anti-intellectual, anti-educational and anti-learning culture amongst boys. Evidence from the literature can be divided into two main strands of explanation. Firstly, it has been suggested that because boys tend to come into contact mainly with women in their formative years, owing to the increase in single (predominantly) female parent families and the female world of the primary (and increasingly secondary) school, they see few role models of successful men at home and in school (Pickering, 1997; Bleach, 1998b), which may affect their beliefs about adult roles (OFSTED and EOC, 1996).

Secondly, commentators (Pickering, 1997; Bleach, 1998b) have suggested that some boys may develop an anti-school subculture because, from as early as KS2, as part of their gender development, boys tend to take on a desire to be as unfeminine as possible, and an important component of masculinity is the avoidance of what is feminine. Boys may therefore develop the belief that a positive attitude towards schooling, the choice of female subjects and overt involvement and engagement in school and learning are effeminate and therefore at odds with the development of their masculine identity (Cohen, 1998). Thus the pressure to conform to the gender stereotype of not working and opting for 'male' subjects is immense. In contrast, girls, in the main, have rarely been negatively labelled for achieving (Gallagher, 1997; Cohen, 1998) or according to their subject choices.

2.2.3 Pupil attitudes and behaviour

Research (Arnot *et al.*, 1998; Bleach, 1998b; Bray *et al.*, 1997; OFSTED and EOC, 1996; Warrington and Younger, 1997) has shown that, overall, boys and girls have notably different orientations towards schoolwork and learning which may contribute to gender differences in performance. In general, girls have high aspirations, value presentation and clear expression. They tend to underestimate their own ability and therefore work hard to try and compensate. Girls often spend more time on their homework because

they want to achieve high standards and please their teachers (Bray *et al.*, 1997; OFSTED and EOC, 1996). They also tend to show greater levels of enjoyment of both academic and non-academic aspects of school life (Arnot *et al.*, 1998).

In contrast, boys usually prefer active learning, tend to be overconfident and often overestimate their own ability (Bray *et al.*, 1997; OFSTED and EOC, 1996; Bleach, 1998b). They tend to have less positive attitudes towards schoolwork and homework, are less attentive in class and are more reluctant to do extra work (MacDonald *et al.*, 1998; Warrington and Younger, 1997; Pickering, 1997; Gallagher, 1997; OFSTED and EOC, 1996).

In relation to issues of behaviour, the literature reveals that, in general, boys, compared with girls, have lower standards of behaviour and higher levels of disciplinary problems (Warrington and Younger, 1997; Gallagher, 1997). There are six times as many boys as girls in special schools for pupils with behavioural difficulties (Bray *et al.*, 1997), boys are eight times more likely to be identified as having special educational needs, and more boys than girls are excluded from school (Bray *et al.*, 1997; OFSTED and EOC, 1996; Bleach, 1998a).

Out-of-school factors

2.2.4 Biological differences

Some commentators have suggested that gender differences in attainment can be attributed to the genetic differences that exist between boys and girls. For example, it has been argued that because girls mature physically more rapidly than boys this may account for their more mature personal and social behaviour (OFSTED and EOC, 1996).

However, other researchers have noted that the existence of:

> *such great variety amongst the performance of boys and girls, in their many different schools in their many different settings, would seem to suggest that there is little 'uniformity' amongst the genders to give much credence to the belief that genetics are the dominant factor.* (Pickering, 1997, p. 49)

In addition, it has been noted that biological explanations fail to provide an adequate explanation for changes over time (Gallagher, 1997).

2.2.5 The impact of socialisation

The second main out-of-school factor which is often used to explain gender differences in attainment is the different socialisation processes that boys and girls experience. Researchers (Murphy and Elwood, 1996, 1998; Arnot *et al.*, 1998; Bleach, 1998b) have noted that, in general, boys and girls are socialised, from birth, towards particular roles, often based on adult interpretations of appropriate and inappropriate behaviours. These

expectations set in train different patterns of development which manifest themselves in playgroups and extend through the early years of primary school.

It has been found that parents tend to socialise girls to sit still, to conform, to be quiet and to listen (Bray *et al.*, 1997; Bleach, 1998b). By the age of seven, girls tend to listen and pay attention, to play without supervision and to establish their own rules and roles. By secondary level, they are often characterised as having a compliant motivational style (Bleach, 1998b).

In contrast, boys tend to be socialised to be noisy and attention-seeking, and at seven years old often find it difficult to sit still and pay attention. By secondary school, they usually want to do everything quickly, prefer short-term tasks and identify with 'macho' values which can lead them to regard studious behaviour as unmanly and, on occasion, result in disruptive and threatening behaviour (Bleach, 1998b).

Overall, these different experiences of socialisation inevitably lead many boys and girls to adopt different interests, pastimes and hobbies from an early age which provide them with different language opportunities and align them in different ways to schooling and learning (Murphy and Elwood, 1998). These differential interests (e.g. preferences for particular types of books) are then exploited within schools to encourage boys and girls to learn. The effect of this is to encourage boys and girls to continue focusing on limited aspects of their environment, encouraging the development of particular skills. In addition, Murphy and Elwood (1998) point out that

> the different experiences students acquire not only affect the skills and knowledge they develop but also their understanding of the situations and problems in which to apply them. (p.166)

Highlighting the significance of these different processes of socialisation, Arnot *et al.* (1996) revealed that baseline assessments show a close correspondence between girls' preferred activities and their levels of achievement. Murphy and Elwood (1998) suggest that the implication of these gender differences is that, in general, boys enter school with less developed skills in the relevant areas and are therefore potentially more vulnerable than girls to becoming disaffected. They therefore conclude that boys' and girls' differential interests and preferences for learning, combined with teachers' and pupils' treatment of these in schools, can lead to differences in performance which are often unrelated to the ability of pupils (See Section 2.2.1).

2.2.6 Social change in late twentieth century Britain

Some researchers have argued that gender differences in attainment are largely influenced by social patterns. This explains why attainment patterns change over time and also implies that they are amenable to further change (Gallagher, 1997).

Over the last 20–30 years, a number of social changes have occurred which, commentators suggest, provide some explanation of why girls, in general, are currently outperforming boys in levels of attainment. The literature highlights three significant shifts: firstly, the removal of barriers to girls' achievement through the introduction of comprehensive schooling and the demise of the 11+ (Epstein *et al.*, 1998); secondly, the impact of equal opportunities initiatives during the 1980s which enhanced girls' expectations and encouraged them to challenge stereotypes (Gallagher, 1997).

Thirdly, the labour market changes during the 1980s led to the collapse of the youth labour market and thus the disappearance of apprenticeships and on-the-job training, which disproportionately affected (working-class) males (Arnot *et al.*, 1998). Whilst some boys have been able to adapt to the new vocational/curriculum opportunities that provide them with a route into the labour market, some researchers have argued that labour market changes may have helped create a group of 'macho' lads. These are males whose perception of the current job market leaves them with a sense of hopelessness and a decrease in motivation (Bray *et al.*, 1997; Bleach, 1998b). They see little reason to move into non-stereotypical jobs as most are less well paid than the jobs that (working-class) men have traditionally done (Warrington and Younger, 1997; Pickering, 1997). As a result, they have become increasingly separated from the mainstream and respond to academic failure and poor employment prospects by claiming other sources of power such as sporting prowess, physical aggression and sexual conquest (Jackson, 1998; Mac an Ghaill, 1988).

It is also important to note that although there have been significant changes in labour market participation, the higher aggregate attainment levels for women have not yet translated into labour market equality in terms of pay or opportunities for promotion (Gallagher, 1997).

2.3 Strategies for addressing gender differences

On the basis of the explanations cited above, researchers and commentators have identified a number of strategies which may address the current discrepancies in gender differences in achievement. These strategies address both the school-related factors – which include curriculum content, methods of assessment, teacher–pupil relations in school, pupil subcultures, attitudes and behaviour – and the out-of-school factors, in terms of the impact of socialisation and social change.

Firstly, it has been suggested that changes should be made to teaching methods and classroom organisation to engage pupils' interests, work with pupils' strengths and correct their perceived weaknesses. This approach includes the use of curriculum content and resources which interest both boys and girls, more teacher-led work, mixed gender pairing, single-sex classes/grouping and the provision of learning support. However,

researchers (Epstein *et al.*, 1998; Raphael Reed, 1998) have noted that care should be taken to ensure that 'boy-friendly' changes in teaching styles and classroom environments do not have negative implications for girls, and that girls are not exploited to police, teach, control and civilise boys.

It has also been advocated that learning styles are developed which give boys and girls the opportunity to appreciate the value of different ways of working and communicating for different purposes (Murphy and Elwood, 1998). In addition, Murphy and Elwood (op.cit.) argue that if particular styles of response are agreed to be significant elements of achievement in particular subject areas, then this should be made clear to students and become a matter for teaching and not just assessment.

Secondly, the literature suggests that teacher–pupil relations could be improved through raising staff awareness about gender differences in achievement (MacDonald *et al.*, 1999), developing and implementing whole-school policies which cover all aspects of work and behaviour, and monitoring classroom dynamics in terms of pupil–teacher interaction, levels of attention and support, frequency of questioning, levels of encouragement, teacher expectations and use of discipline.

Thirdly, some researchers (Warrington and Younger, 1997; Pickering, 1997) have stated that the negative impact of school subcultures and poor attitudes towards school and learning could be addressed by encouraging a more mature attitude towards work and by creating a culture where male students can achieve without fear of ridicule and where disruptive behaviour is not allowed to undermine learning. In addition, the promotion of personal and social development could encourage boys to improve their attitudes towards school, and girls to improve their levels of assertiveness (OFSTED and EOC, 1996). Personal and social education could also help pupils to discuss and challenge the social construction of gendered behaviours, which may lead to long-term progress in the relationship between gender and achievement (Arnot *et al.*, 1998).

Finally, it has been argued that given the material and ideological changes to men's position and role in society, schools could consider using other pupils, staff and people from the local community as role models and mentors for pupils. A number of commentators have, however, noted that care should be taken to ensure that male role models/mentors are not used to reinforce the notion of gender superiority (Pickering, 1997) and thus undermine the integrity of female teachers (Raphael Reed, 1998), but are more appropriately used to challenge gendered stereotypes. In addition, it has also been suggested (Warrington and Younger, 1997; Pickering, 1997) that pupils should be encouraged to be more flexible and open in their attitudes to employment pathways.

A number of researchers (Arnot *et al.*, 1998; MacDonald *et al.*, 1998) have noted that not only are gender differences in achievement varied and changing, but so too are explanations for their existence. They therefore advise that before LEAs and schools take the decision to implement

strategies, they should analyse performance data so that they can: identify patterns of underachievement; consider other areas where gender differences occur (e.g. rate of exclusions, attendance levels); target groups of pupils at risk; and isolate the factors which contribute to gender differences (Arnot *et al.*, 1998). Once strategies have been implemented, Arnot *et al.* (op.cit.) suggest that schools should carefully monitor and evaluate their impact within schools and the local context in order to ensure that the strategies are addressing the needs of the school (OFSTED and EOC, 1996).

In summary, Jackson (1998) argues that the present destabilisation of 'normal' assumptions about boys in schools can lead either to a violent reassertion of heterosexual, macho culture through a shift towards the masculinisation of teaching forms, or an opportunity to make boys' behaviours in schools an explicitly visible object in equal opportunities. However, in order to achieve this, Jackson states that there is a need to move away from old models of equal opportunities work in schools, which were not very effective because they worked within the simplified dichotomised framework of male versus female, towards increased recognition that boys and girls have multiple identities and that gender relations shift as socioeconomic conditions change. By adopting this approach, Jackson argues, gender differences in achievement can be viewed as an integral part of more widely coordinated equal opportunities work on changing traditional gender cultures in schools.

2.4 Summary

This brief review of the recent literature on gender differences in achievement has highlighted the extent of such differences, explanations for their existence and the types of strategies which have been proposed to address them.

The extent of gender differences. In recent years, girls' levels of achievement have, in general, increased at a faster rate than those of boys. This has resulted in a gender gap in which girls outperform boys in virtually all subjects at GCSE and at each key stage. Differences in subject preferences prior to GCSEs and post-16 continue to follow gender-stereotypical lines

Explanations for gender differences can be broadly divided into school-related factors and out-of-school factors.

1. **School-related factors** include:

   ♦ the impact of recent changes in curriculum content and assessment procedures, which, it has been argued, generally favour girls' learning styles and preferred style of response;

   ♦ teacher–pupil relations, which suggest that teachers interact more negatively with boys than with girls; and

♦ the finding that boys have more negative attitudes towards school and learning, and display more anti-learning behaviour.

2. **Out-of-school factors** include:

♦ biological differences, which are often dismissed for failing to explain why there are more similarities between boys' and girls' levels of achievement than there are differences;

♦ the impact of boys' and girls' different experiences of socialisation, which, it has been argued, generally predisposes them towards distinct interests and ways of learning that may account for their different levels of performance; and

♦ wider social changes, which have witnessed the impact of equal opportunities initiatives and labour market changes that have had a disproportionately greater impact on (working-class) males than any other social group.

Strategies for addressing gender differences. Commentators in the field have advocated a wide range of different initiatives which may help schools to address gender differences in achievement. These include changing teaching methods, implementing different forms of classroom organisation, improving teacher–pupil relations, and introducing mentoring and role modelling to counteract negative attitudes towards school and learning and to challenge traditional constructions of gendered behaviours.

This overview of recent research into gender differences in achievement reveals that most of the work carried out, to date, has tended to focus on the extent of the gender gap and explanations for its existence. Whilst the findings from this work have been used by researchers to make some tentative suggestions about the different types of strategies that could be adopted to address these differences, there has been very little research into:

♦ what strategies schools are actually adopting;

♦ why schools are adopting particular strategies;

♦ how different strategies are being implemented; and

♦ the extent to which different strategies are addressing gender differences in achievement.

The main aim of this project is to embark upon this task.

The following chapter describes the findings from the first phase of the project, which explored, in a general way, the strategies that were being adopted within schools to address gender differences in achievement.

3. STRATEGIES FOR ADDRESSING GENDER DIFFERENCES IN ACHIEVEMENT

One of the first activities of the project was to obtain nominations from LEAs, across England and Wales, of schools which had implemented strategies that were successful in addressing gender differences in achievement (for use in Phase 2 of the project). Additional information was gathered regarding:

♦ the extent to which strategies for addressing gender differences in achievement had been adopted by schools within the LEA; and

♦ descriptions about the types of strategy that had been adopted, such as whether they were LEA- or school-based, when they had been implemented and what groups of pupils and subject areas they targeted.

This chapter presents the analysis of the information provided by LEAs. It is important to note that these findings are not based on a comprehensive survey of the actions of schools across England and Wales in relation to the issue of gender differences in achievement. However, the findings do present a useful overview of the response of schools to gender gaps in performance.

In order to obtain the information required, a pro forma (see Appendix A) was sent to equal opportunities advisers, or other appropriate personnel, in all LEAs (n=175) in England and Wales.

A total of 97 (55 per cent) LEAs returned the completed pro forma. Table 1 below shows that between 42 per cent and 68 per cent of all LEAs within each of the main types of authority (e.g. London, metropolitan, county) provided a response.

Table 1: Response rate from different types of LEA

Types of LEA	Number of LEAs that responded	Total number of LEAs	Percentage of LEAs that responded (%)
Inner and outer London	14	33	42
Metropolitan	22	37	59
Wales and Islands	17	25	68
New authorities	35	65	54
Counties	9	15	60
TOTALS	**97**	**175**	**55**

The information provided on the returned pro formas was statistically analysed and the main findings are highlighted below.

3.1 Prevalence of strategies adopted

Of the 97 LEAs that returned the pro forma, 86 per cent (n=83) stated that they were aware that strategies for addressing gender differences in achievement were currently in place at the LEA and/or school level. Of these LEAs, 73 per cent stated that they were aware of strategies in place at the school level, 64 per cent reported the prevalence of strategies in place at the LEA level and 74 per cent stated that they knew of future plans to implement strategies at either the LEA and/or school level.

3.2 Types of strategy implemented

Table 2 below highlights the different types of strategy (see Appendix B for definitions of the different strategies) that were adopted by LEAs *and schools* to address gender differences in achievement. The table lists the strategies in order of popularity.

Table 2: Types of strategy implemented

	Number of LEAs and schools implementing the strategy (N=83)	
Types of strategy	**Number**	**Percentage (%)**
Staff training	52	63
Policy development	45	54
Target setting	41	49
Role modelling/mentoring	40	48
New teaching methods	37	45
Single-sex classes/grouping	33	40
New forms of class organisation	29	35
Parental involvement	27	33
Mixed-gender pairing	17	21
Other strategies	17	21
Learning support	14	17

The popularity in the adoption of different types of strategy varied according to whether they were being implemented at the LEA level or the school level. The strategies most frequently adopted at the LEA level focused on whole-school initiatives. Thus the four most popular strategies implemented by LEAs were, in descending order: policy development, staff training, target setting and new teaching methods.

In contrast, the strategies most frequently adopted at the school level tended to focus on classroom organisation practices and teaching methods. The four most popular school strategies were, therefore, single-sex classes/

grouping, role modelling/mentoring, new forms of class organisation and new teaching methods.

The majority of the strategies reported had only relatively recently been implemented. The analysis reveals that 60 per cent of the strategies were implemented during 1997–1998, 14 per cent during 1995–1996 and just four per cent prior to 1995.

3.3 Focus of strategies

3.3.1 Schools targeted

Of the strategies reported, 40 per cent targeted pupils at the secondary level, 17 per cent targeted pupils at the primary level and 29 per cent targeted pupils at both the primary and secondary level. Within this general framework, a number of strategies were reported to focus on specific year groups within these school types.

Further analysis also revealed that the types of strategy adopted by schools varied according to whether they were primary or secondary schools. For example, the three strategies which were most frequently reported to be in use at the primary level were: new teaching methods (which possibly reflects the relatively recent introduction of the National Literacy and National Numeracy Projects), parental involvement and role modelling/mentoring, as Table 3 shows.

Table 3:   Strategies targeting primary school pupils

Types of strategy	Number of strategies implemented to target pupils at the primary level (N=60)	
	Number	Percentage (%)
New teaching methods	17	28
Parental involvement	10	17
Role modelling/mentoring	5	8
Staff training	4	7
Target setting	4	7
Single-sex classes/grouping	4	7
New forms of class organisation	4	7
Other strategies	4	7
Learning support	4	7
Policy development	2	3
Mixed-gender pairing	2	3

(NB Percentages do not sum to 100 due to rounding.)

In contrast, the three strategies that were most frequently reported to be in use at the secondary level were role modelling/mentoring, staff training and single-sex classes/grouping, as Table 4 reveals.

Table 4: Strategies targeting secondary school pupils

Types of strategy	Number of strategies implemented to target pupils at the secondary level (N=142)	
	Number	Percentage (%)
Role modelling/mentoring	23	16
Staff training	22	15
Single-sex grouping	20	14
Policy development	16	11
Target setting	15	11
New forms of class organisation	13	9
New teaching methods	9	6
Parental involvement	9	6
Mixed-gender pairing	6	4
Other strategies	5	4
Learning support	4	3

(NB Percentages do not sum to 100 due to rounding.)

In terms of strategies which were implemented to target gender differences at both the primary and secondary level, the most frequently reported to be in use were those which focused on whole-school policy initiatives: policy development, staff training and target setting.

3.3.2 Pupils targeted

The majority of the strategies (55 per cent) implemented to address gender differences targeted both boys and girls. Of these strategies, the three reported to be most frequently in use were policy development, target setting and staff training.

The details are given in Table 5 overleaf.

Table 5: Strategies targeting boys and girls

Types of strategy	Number of strategies implemented to target both boys and girls (N=193)	
	Number	Percentage (%)
Policy development	30	16
Target setting	29	15
Staff training	24	12
New forms of class organisation	21	11
Role modelling/mentoring	20	10
New teaching methods	19	10
Single-sex classes/grouping	16	8
Parental involvement	13	7
Mixed-gender pairing	9	5
Learning support	6	3
Other strategies	6	3

(NB Percentages do not sum to 100 due to rounding.)

It should be noted, however, that 31 per cent of the strategies were targeted specifically at boys. Of these strategies, the three reported to be most frequently in use were staff training, role modelling/mentoring and new teaching methods (see Table 6).

Table 6: Strategies targeting boys specifically

Types of strategy	Number of strategies implemented to target boys specifically (N=108)	
	Number	Percentage (%)
Staff training	22	20
Role modelling/mentoring	14	13
New teaching methods	12	11
Policy development	11	10
Target setting	10	9
Single-sex classes/grouping	10	9
Parental involvement	9	8
Other strategies	7	6
Learning support	5	5
New forms of class organisation	4	4
Mixed-gender pairing	4	4

(NB Percentages do not sum to 100 due to rounding.)

These trends, for strategies targeted at all pupils and for strategies targeted specifically at boys, remain consistent for strategies implemented at both the primary and secondary level.

Further investigation was conducted into the relationship between the number of strategies adopted to target specific groups of pupils (e.g. boys) and the date at which these strategies were implemented. This revealed that the percentage of strategies adopted to target both boys and girls had decreased from 71 per cent prior to 1995 to 52 per cent during 1997–1998. In comparison, the percentage of strategies adopted to target boys specifically had increased from 14 per cent prior to 1995 to 41 per cent during 1997–1998.

3.3.3 Subject areas targeted

The analysis revealed that 39 per cent of the strategies reported were implemented at the cross-curricular and extracurricular level. However, 32 per cent of the strategies reported were implemented within core subjects (either individually or in combination). The strategies most frequently adopted for core subjects were new teaching methods, single-sex classes/grouping and target setting. It was also interesting to note that 29 per cent of the strategies that targeted boys specifically focused on English compared with 20 per cent of the strategies that were implemented to target both boys and girls.

3.4 Summary and implications for Phase 2

The findings from Phase 1 of the project reveal that many of the strategies adopted by LEAs and schools reflect those advocated by researchers who have investigated the possible causes of gender differences in achievement. However, the extent to which these strategies have successfully addressed gender differences, regardless of the likely cause(s), has yet to be explored.

The main aim of Phase 2 of this project was therefore to:

♦ investigate the rationale behind schools' adoption of specific strategies;

♦ explore the way in which strategies have been implemented; and

♦ assess the extent to which the strategies had successfully addressed gender differences in achievement.

It was felt that this could best be achieved through the use of case studies. A number of schools were therefore selected as case studies from those nominated by LEAs as having successfully implemented strategies for addressing gender differences.

On the basis of the review of the recent literature and the results of the analysis of the pro forma, it was decided to focus the case studies on the following three main areas:

- classroom organisation – in terms of single sex classes and single-sex grouping at the secondary level;

- mentoring and role modelling – in terms of the use of adults from outside of school, members of staff within school and peers, at the secondary (predominantly) and primary level; and

- literacy, at the primary level.

These areas were chosen because they cover a number of different strategies which the literature suggests schools are increasingly turning towards but which are relatively under-researched – with the exception of literacy at the primary level, which was chosen because of the wealth of research which identifies it as the main area of difference in terms of the achievement of boys and girls.

Having identified these three main areas for further investigation, 20 schools (from those nominated by LEAs as having strategies in place to address gender differences in achievement which represented examples of good practice) were then selected as case studies on the basis that they:

- had strategies in place that fell under one of the three main areas on which Phase 2 was focusing;

- varied in terms of geographical location (in terms of spread across: England and Wales; different categories of local authorities; different contexts, such as urban, suburban and rural);

- represented different catchment areas in terms of the social background of the pupils.

It was envisaged that data from the 20 case study schools would be obtained through:

- interviews with teachers, in order to explore: the rationale, planning and training informing the strategies; how the strategies had been implemented; and the ways in which the effects of the strategies had been evaluated;

- interviews exploring pupils' perceptions of the strategies; and

- the collection and analysis of relevant documentation.

It is intended that the main outcome of Phase 2 will be a report outlining the background to the study (as presented in this report) and highlighting the findings from the case studies. The report will aim to inform and assist teachers by providing detailed examples of transferable strategies for addressing gender differences in achievement.

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APPENDICES

Appendix A: Pro forma sent to LEAs

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GENDER DIFFERENCES IN EDUCATIONAL ACHIEVEMENT

A Pro Forma for Local Education Authorities in England and Wales

All responses will be treated as confidential and no individuals will be named in any report written as a result of this research. Please address any initial inquiries about the questionnaire to Catherine Cox in Field Research Services (tel. 01753 574123 ext. 339)

We would be grateful if you could complete this questionnaire and return it to the NFER in the envelope provided, within **TWO WEEKS** of receiving it.

Thank you for taking the time to complete this questionnaire.

BUP
3782

LEA

Gender Differences in Educational Achievement

The main aim of this NFER project is to investigate the strategies adopted by schools and LEAs to address gender differences in educational achievement. The outcomes will lead to the production of a practical guide for teachers. Details of this project are given in the enclosed research information sheet.

Phase 1 of the project is a survey of the strategies which are in place to address gender differences in achievement across **all** LEAs in England and Wales. We would therefore be grateful if you could complete and return this short pro forma. The pro forma is divided into three sections:
- Section 1. Initiatives in place for addressing gender differences in achievement.
- Section 2. Nominations of schools: examples of good practice.
- Section 3. LEA information.

SECTION 1. INITIATIVES IN PLACE FOR ADDRESSING GENDER DIFFERENCES IN ACHIEVEMENT

1.1   Has the LEA established any initiatives to address gender differences in educational achievement? (please tick)

Yes [   ]   No [   ]

1.2   Are you aware of any schools (primary and/or secondary) which have established initiatives to address gender differences in educational achievement within your LEA? (please tick)

Yes [   ]   No [   ]

1.3   Are you aware of any plans, either at LEA or school level, to establish (further) initiatives? (please tick)

Yes [   ]   No [   ]

If you answered YES to either question 1.1 or 1.2, please go to question 1.4 (page 2).

If you answered NO to both questions 1.1 or 1.2, please go to SECTION 3 (page 4).

1

1.2   Please provide information on the strategies in place for addressing gender differences in achievement, by completing the table below.

If there is any additional information, regarding the description of the strategy or the way in which it has been implemented, which you think it is important for us to be aware of, please insert it in the 'Additional information' section at the bottom of the page.

Types of strategy	Scope of strategy (LEA/ school based)	Year started	Year group(s) targeted (R-Y12)	Pupils targeted (boys/ girls/ both)	Subject areas targeted
Example: *Learning support*	*LEA*	*1997*	*Y10-12*	*girls*	*maths*
Policy development					
Staff training					
New teaching methods (e.g. circle time)					
New forms of class or pupil organisation					
Single-sex classes/grouping					
Mixed-gender pairing					
Target setting					
Parental involvement					
Role modelling/ mentoring					
Learning support					
Other (please describe)					

Additional information: . . . .
. . . .
. . . .
. . . . (please continue on a separate sheet if necessary)

2

SECTION 2. NOMINATIONS OF SCHOOLS; EXAMPLES OF GOOD PRACTICE.

We are keen to gather further information about the strategies that schools within your LEA have implemented. Depending on your role within your LEA, we would be grateful if you could:

- nominate up to five primary, and/or up to five secondary, schools which have **successfully** implemented strategies to address gender differences and which, therefore, represent examples of good practice; and
- nominate at least two schools per strategy at each relevant level (primary/secondary).

The following list of criteria has been compiled to assist you in identifying appropriate schools.

- Schools have taken a **systematic approach** in their identification of the problem and their decision to implement a particular strategy.
- Schools have systems in place for **monitoring** the outcomes of the strategies (e.g. systematic observation, tracking of pupils, tests, questionnaires).
- Schools have evidence that the strategy is **successfully** addressing the issue (e.g. observational evidence, test results).

2.1 Your nominations of PRIMARY schools

Full name of school: ....

Strategy implemented: ....

Full name of school: ....

Strategy implemented: ....

Full name of school: ....

Strategy implemented: ....

Full name of school: ....

Strategy implemented: ....

Full name of school: ....

Strategy implemented: ....

3

2.1 Your nominations of SECONDARY schools

Full name of school: . . . .

Strategy implemented: . . . .

Full name of school: . . . .

Strategy implemented: . . . .

Full name of school: . . . .

Strategy implemented: . . . .

Full name of school: . . . .

Strategy implemented: . . . .

Full name of school: . . . .

Strategy implemented: . . . .

SECTION 3. LEA INFORMATION

3.1 Have you answered this questionnaire in relation to primary schools, secondary schools, or both primary and secondary schools? (please tick)

Only primary schools		Only secondary schools		Both primary and secondary schools	

3.2 In case we need to contact your LEA for further information, we would appreciate it if you could provide us with either your details or those of a colleague who you think might be in a better position to assist us.

Your name:	. . . .
Job title:	. . . .
Telephone number:	. . . .
Name of LEA:	. . . .
Address:	. . . .
	. . . .

Thank you for completing this questionnaire.
Please return the pro forma to the NFER in the envelope provided.

4

Appendix B: Definition of strategies

1. Policy development
- LEA Education Development Plans and School Development Plans
- devising guidelines / equal opportunities policies
- statistically analysing, monitoring, tracking pupil performance to inform policy

2. Staff training
- INSET
- improving staff awareness

3. New teaching methods
- use of new teaching strategies – circle time, paired reading, reading aloud, national projects
- use of new resources – big books, information technology

4. New forms of class or pupil organisation
- introduction of setting, within-class grouping
- seating pupils: boy – girl – boy – girl

5. Single-sex classes/grouping
- in specific or multiple subjects

6. Mixed-gender pairing (mixed)

7. Target setting
- at school level, year level, class level or pupil level

8. Role modelling/Mentoring
- use of teachers, parents, people from the local community, pupils, peers,
- paired reading – either with peers/adults

9. Parental involvement

10. Learning support
- homework clubs
- revision classes
- after-school activities

11. Other
- conferences investigating issues
- development of steering/working groups to investigate the issue

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an investigation into gender differences in achievement
Phase 1: a review of recent research and LEA information on provision

Over the past few years there has been growing concern over boys' relatively low levels of achievement in comparison with girls. In response, the NFER is carrying out a project, as part of the Local Government Association research programme, to investigate the issue of gender differences in achievement. This report presents the findings from **Phase 1** of that investigation. It includes:

- An overview of recent research into gender differences in achievement, which highlights:

    - the extent of gender differences in achievement;

    - explanations for the existence of such gaps in performance; and

    - commentators' suggestions for strategies that schools can adopt to address these differences in performance.

- The findings from an analysis of information provided by LEAs, across England and Wales, on the different types of strategies that have been implemented within schools to address gender differences in achievement.

Phase 2 of the study will culminate in a further report which will draw on the detailed findings arising from case studies of schools, nominated as representative of good practice by LEAs.