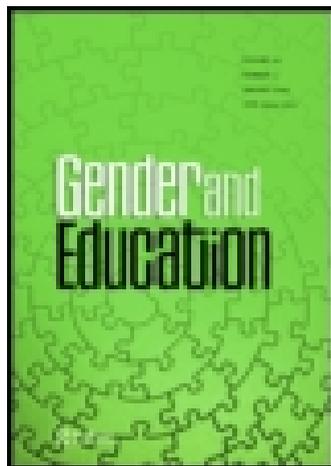


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# A matter of attitude? Developing a profile of boys' and girls' responses to primary schooling

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Much of the research investigating pupils' attitudes towards school has been qualitatively-oriented. This analysis explores the extent to which some of the differences between pupils can be rendered in quantitative terms. Drawing upon a survey of 1310 pupils in 21 primary schools, its main concern is to explore the extent to which there is a 'gender gap' in attitudes and responses to school. The question of whether schools participating in the research faced common or distinct challenges in terms of pupils' attitudes was also of interest. Analysis confirms that, in line with previous research, primary girls were more favourably disposed towards school than primary boys. Factor analysis of pupil responses to an attitude questionnaire showed that girls were more positive in terms of engagement with school and pupil behaviour but that boys had higher academic self-esteem. There were no differences between the two sexes in terms of relationships with peers. A cluster analysis identified the existence of five groups of pupils, some of whom have been highlighted in previous research using different approaches. These groups were: (1) the enthusiastic and confident; (2) the moderately interested but easily bored; (3) the committed but lacking self-esteem; (4) the socially engaged but disaffected; and (5) the alienated. The gendered nature of some of these groupings was apparent: the first group was dominated by girls while the fourth and fifth were dominated by boys. However, analysis indicated that such gender-based differences were, to some extent, matters of degree. Some 14% of primary boys, for example, were judged to be alienated, but so were 9% of primary girls. An analysis of the prevalence of each group within each of the participating schools showed that while many primary schools had similar overall pupil profiles, some faced specific challenges associated with having larger proportions of particular groups of children (for example the alienated, the socially engaged but disaffected or the committed but lacking self-esteem). The implications of the findings for those concerned with interventions in relation to gender issues are briefly discussed.

## Introduction

Boys' underperformance in Key Stage 2 tests, notably in relation to literacy, continues to generate headlines. Younger and colleagues (2005, p. 20), for example, note a

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'marked disparity between the attainment of boys and girls in English' with 83% of girls reaching level 4 in 2004 compared with 72% of boys. While noting that there continues to be a sizeable gap in performance, there is some debate about whether it is widening, narrowing or staying relatively stable over time (for fuller accounts see Arnot *et al.*, 1998; Gorard *et al.*, 1999).

Less attention has been given in recent years to pupils' attitudes towards school. This study has been stimulated, first, by our wish to explore the extent to which pupils' attitudes and responses to their schools provide evidence of a 'gender gap' to parallel that found in terms of academic performance, and second, by an interest in establishing some of the ways in which, in addressing gender issues, primary schools face common challenges.

By comparison with the amount of work undertaken over the years on academic outcomes, the area of pupils' attitudes to schooling remains under-researched. Furthermore, the research approaches adopted have differed in crucial respects, sometimes making dialogue across paradigms difficult. While work on the correlates of academic performance has been dominated by quantitatively-oriented evidence, this has nonetheless been complemented by a powerful strand of smaller-scale, challenging and qualitatively-oriented studies. By contrast, research into pupils' attitudes and responses to schooling has been largely pursued by researchers using qualitative methods, although there have been some larger-scale surveys in secondary schools. At the primary school stage, however, the research has been almost exclusively qualitative. A range of strategic insights into pupils' attitudes to schooling, generated by gender researchers over almost two decades, has remained largely unexplored in terms of the nature and extent of differences *between* schools. While such differences can be inferred from previous work no attempt, to the best of our knowledge, has been made to establish their existence.

The research reported here draws on a large-scale survey of pupils' attitudes to school to explore issues around the extent to which boys' and girls' responses are gender-related. In the process a procedure known as cluster analysis was employed to construct several groups of pupils who are similar in terms of attitude to school. The extent to which this profile or 'typology' is gender-related is then considered. Finally, the distribution of these emerging pupil types across different primary schools is considered.

### **Previous research on types or groups of primary pupils**

Which groups of pupils have tended to dominate recent discussions of gender issues? Perhaps the most prominent is that of the disengaged or alienated male. His behaviour, general unruliness and lack of interest in school are seen as dominating classroom life. As Power and colleagues (1998) have argued, boys who are failing to match up to the school's expectations can (more or less rapidly) find elements of an alternative identity by reconfiguring themselves as the 'hardest' or 'cheekiest' members of the peer group. Skelton and Francis (2003, p. 6) suggest that this orientation is strengthened by boys' perceptions of masculinity as being somehow 'competitive, macho and "laddish"'. A process of 'gradual alienation from school' ensues, they argue, as boys

'seek to position themselves as "hard" and "cool" and to distance themselves from the image of the "boffin" who is constructed as effete'. This group seems to grow in size (and possibly influence) as pupils get older, and especially after the move to secondary school. In the upper primary stages, however, its size is unclear.

The image of the 'typical' girl seems almost as sharply delineated and contrasts with that of the alienated male. Girls are variously characterised by their teachers as well-behaved in class, nice and sensible (Clarricoates, 1987; Walden & Walkerdine, 1985). Some girls internalise the norms of schooling to such an extent that they aspire to be 'model pupils' in their teachers' eyes. Teachers, in turn, can take advantage of girls, enlisting them as allies in the battle to 'police, teach, control and civilise boys' (Epstein *et al.*, 1998). In a minority of cases, as Francis (2000) has shown, this apparent willingness to conform on the part of girls even extends to their behaving as 'quasi-teachers'.

Another dimension along which girls have been differentiated relates to their perceived confidence. The research literature here has tended to emphasise the extent to which girls have experienced a relative *lack* of confidence, even when doing well or quite well in comparison with boys. Licht and Dweck (1984) report that, when faced with obstacles, bright girls were much more likely to fall into a 'helpless' pattern than boys; such responses contributed in turn to decreased performance and maladaptive attributional patterns (Diener & Dweck, 1978). More than two decades later Lucey and Reay (2002) reported a similar phenomenon occurring even among some girls who, compared with their peers and especially in relation to boys, would be judged as high-performing. Teachers in turn may contribute, albeit unwittingly, to this process. Skelton and Francis (2003, p. 11) argue that the tendency for girls to be devalued and, crucially, to devalue themselves has been so persistent that concerns about lack of confidence, far from diminishing in recent years, 'continue to be expressed by a *majority* of primary school girls' (our emphasis).

While male alienation and female lack of confidence dominate the literature they are clearly an incomplete conceptualisation of the different 'positions' pupils might adopt towards school. Other pupil types, however, have not been given the same prominence. We know rather less, for example, about the alienated girl than the alienated boy, although 'ladette' culture is beginning to be explored in the secondary sector (Jackson, 2004). Reay (2001) suggests that when girls misbehave they too can incur their share of criticism, being described by some of their teachers as 'scheming little madams' and 'bad influences' while the same teachers refer to similar boys as simply 'mucking about'. Again, however, the size of this group remains unclear.

Other pupil types have also featured less prominently in gender research. The male equivalent of the sensible, hard-working female does not appear to have been studied in much depth. Frosh *et al.* (2002) argue that the male peer group creates polarising pressures which may make it difficult for boys to occupy this space. Popularity among one's peers and working hard at school can be seen as mutually incompatible and may result in boys being bullied or excluded from friendship groups, especially if they are clever. Similar pressures might put boys lacking confidence in a difficult position, forcing them to make decisions about their emerging masculinity. There is little

room, apparently, for the shy, modestly well-behaved boy struggling simultaneously to keep up with his schoolwork and to find a place among his more aggressive peers. Social class (Mac an Ghail, 1994; Willis, 1977) and ethnicity (Sewell, 1997) can exacerbate these problems for boys and girls (Renold & Allan, 2004). For instance, Willis has shown that working-class boys wishing to succeed academically may find it particularly difficult to negotiate an acceptable version of masculinity within a peer group where laddish masculinity is hegemonic.

Research to date, then, supports the view that pupils take up various positions with respect to attitudes to schooling. While identifying the existence of clearly gendered pupil types, it challenges simplistic notions about how boys and girls may differ. As Skelton and Francis suggest, a more nuanced approach to gender issues is now required. Summarising recent theoretical developments in gender research they argue that the evidence does not support the 'generalised idea that all girls are quiet, hard-working and good at writing any more than all boys are competitive, assertive and naturally good at science' (Skelton & Francis, 2003, p. 14).

### **Differences in pupils' attitudes between schools**

A small but potentially significant body of British research underlines the nature of gender differences in younger pupils' attitudes towards school. In their work with Year 2 children concerning attitudes towards the National Curriculum, West and colleagues (1997, p. 603) reported that girls were generally more positive about a range of specific curriculum activities. Significantly for this research they also found that girls were more positive about going to school than boys. A similar pattern emerged in Jarvis and Pell's (2002, p. 48) samples of Year 2 and Year 6 pupils, although the main concern here was again on curriculum activities, in this case in relation to their attitudes towards primary science. In both age groups, girls were more favourably disposed towards going to school than boys. Both studies nonetheless report patterns of pupil response which were usually pretty positive. Sammons and Mortimore, however, using data from the ILEA Junior School Project to link pupils' attitudes over time, found some evidence of pupil alienation emerging as their sample got older. In each year, they report, boys expressed a much less positive view of school than girls. At the junior level, 'It is clear that boys [were] more likely to be disenchanting with school' (Sammons & Mortimore, 1990, p. 144).

Between-school differences have not featured prominently in most research on pupils' attitudes to date. Research by Tymms (1999) probably constitutes the largest and most systematic attempt to date to explore this issue within the United Kingdom. Using a seven-item scale, he reports that primary school pupils are 'generally very positive about school and about the things they are taught' (Tymms, 1999, p. 74). However, in line with the qualitative research outlined above, he goes on to observe that 'these general patterns hide enormous variations that are seen from pupil to pupil. At all ages and in all areas there are pupils who are extremely positive and there are those that are consistently negative'. Girls, he notes, tended to be significantly more positive towards school than boys. Crucially, from the point of view of this

research, Tymms finds evidence that the school pupils attend seems to make a difference to their attitudes: 'In some schools, the pupils are really quite negative to some aspects of school and in others they are extremely positive' (p. 80). In a related study he concludes that a group of disaffected boys can be identified by the end of the primary stages (Tymms, 2001).

Thomas *et al.* (2000) report that pupils in Scottish primary schools were also pretty positive in their attitudes and responses to school. They used a 26-item pupil questionnaire which was then reduced through factor analysis to four main areas. Their sample was most positive about the aspects of schooling the researchers called 'pupil culture' and 'behaviour' and least positive in relation to engagement with school. With respect to this last area, there was notable variation among primary pupils in the extent to which they reported that they liked going to school. Again, girls were generally more positive about school than boys. Thomas's estimates of the extent of between-school variation in pupils' attitudes, having taken account of various background factors, are generally consistent with those offered by Tymms, ranging from around 4% for pupil culture to 8% for engagement with school.<sup>1</sup>

Both these studies relate to pupils' attitudes during the 1990s. A study of primary schools in inner London during the 1980s by Mortimore *et al.* (1988) provides similar estimates of the extent of between-school variation, but pupils in their sample were not quite as positive as the two later studies indicate.

In sum, all three studies provide evidence that pupils' attitudes vary across schools and that some part of the differences is attributable to gender, with girls usually responding somewhat more favourably than boys. Interestingly, they also all indicate in one way or another that pupils' academic performance and attitudes to school are not that closely linked. As Tymms remarks, 'Many pupils appear to be very positive despite limited success and despite being amongst groups of pupils who are much more successful' (1999, p. 75).

There is, nonetheless, an unresolved dilemma in the research literature reviewed here. This relates to the role of the individual school in *creating* gender-related differences. Researchers from both quantitative and qualitative traditions acknowledge that individual schools face different challenges. But neither tradition has, perhaps, given sufficient emphasis to the part schools themselves may play in generating them. It seems improbable that they are invariably neutral.

### Key questions for this research

There is a long track record of research into differences between schools in terms of achievement levels, and some of this research has included a gender component. By contrast, there is a pressing need for further work on how to conceptualise differences between schools in terms of pupils' attitudes and how to build in a gender dimension. Have different groups of pupils already adopted distinctively different attitudes towards school by the latter stages of the primary years? And, if they have, to what extent are they unevenly distributed across the system, resulting in some schools facing greater challenges than others?

### **The data and the sample**

The data for the analyses which follow are based on the responses of 1310 Year 5 pupils in 21 primary schools which have been participating in a research and development project funded by the Department for Education and Skills. The schools span eight different areas across England and serving a range of different types of community. The schools in each area were broadly matched in terms of socio-economic characteristics. The sample of schools is best described as heterogeneous; it does not constitute a strictly random sample. Clearly if the insights generated by this analysis were to be generalised on a national basis this would require replication with a larger, more strictly representative sample.

As part of the research programme, participating schools were asked to administer a questionnaire on pupils' attitudes and responses to schooling, intended to form a baseline for subsequent work. This had been pre-trialled in several schools to ensure ease of use. Classroom teachers administered the questionnaire guided by instructions provided by the research team. Teachers were asked to clarify and help where necessary and in some cases questions were read out loud. Feedback from schools indicated no difficulties had been experienced and staff were confident that pupils had understood and been able to respond to each item. As schools were asked to complete the questionnaire at their convenience over a period of several weeks it was possible to get a return from nearly every pupil in each school. A breakdown of the responses by school and gender is given in the Appendix in Table A1. It would have been useful to collect information about pupils' ethnic and social backgrounds. However, as this would have involved further activities on the part of the teacher, given the age group, no such information was collected.

Our questionnaire was adapted from previous work undertaken for the Improving School Effectiveness Project (ISEP) based in Scottish primary schools during the mid-to-late 1990s (see MacBeath & Mortimore, 2001; Thomas *et al.*, 2000). The primary version contained 30 items. Pupils were asked to tick one response from a choice of four (always, most of the time, sometimes, never). We needed an instrument which had previously been used at primary level with large samples and which was both short and fairly simple to complete. The reliability and model fit of the ISEP items were acceptable for our purposes. For instance LISREL estimates of test-retest reliability ranged from 0.67 to 0.81 for the underlying scales identified, and goodness of fit indices exceeded 0.95 while root square residuals were less than 0.05, values generally considered to indicate an adequate model (for further details see Thomas *et al.*, 2000, Appendix 2).

### **Pupil responses to schooling**

Table 1 shows the percentages of boys and girls responding to each of the questionnaire items in positive terms (i.e. responding 'always' or 'most of the time' to a positively worded item or 'sometimes' or 'never' to a negatively worded item). For the purposes of presentation the table has been organised to highlight those areas where there were differences in the responses of the two sexes.

Table 1. Percentages of Year 5 pupils responding positively to various items about their attitudes towards and experiences of schools

Questionnaire item	Boys (%)	Girls (%)
<i>No statistically significant differences between boys and girls in responses</i>		
The work is too easy*	77	81
I think I'm clever	50	45
I get to do things I'm good at	55	58
The work is too hard for me*	82	87
I feel left out of things*	82	84
I feel safe in the playground	78	77
I get homework	69	67
My teacher tells me I can do well	74	76
If I'm worried about something I can tell a teacher	67	68
<i>Girls' responses more positive than boys</i>		
I like going to school	61	73
My teacher is fair	80	87
The work is boring*	75	87
I feel happy at school	70	79
I go to school unless I am sick or on holiday	80	84
The work is very good	64	76
I can do things well	68	75
I do my best at school	87	95
My teacher thinks my work is very good	58	70
I behave well at school	76	92
I get bullied*	85	92
Grown-ups at home think I behave well	71	80
My teacher thinks I behave well	66	83
I bully other children*	96	98
Girls in my class behave well	68	82
My teacher helps me to improve my work	75	79
If I'm worried about something I can tell someone at home	70	76
If I'm worried about something I can tell a friend	49	59
If I'm worried about something I keep it to myself	74	79
<i>Boys' responses more positive than girls</i>		
Boys in my class behave well	53	26

Source: Questions taken from the ISEP Primary School Questionnaire.

Notes: The percentages relate to the pupils giving the more positive responses to each item; items which have been reverse coded have been asterisked in the table. For example, 77% of boys and 81% of girls did not think that their work was too easy at school—i.e. the 'positive' response. Similarly 96% of boys and 98% of girls did not bully other children. Statistical *t*-tests revealed that all differences in the second and third sections of the table were significant at the .05 level, and most were significant at the more stringent .001 level. Although some statistical differences would be expected by chance given the number of tests conducted, the fact that there are so many significant differences suggests these are more than random effects.

On 19 items the responses given by girls were considerably more positive than those of boys. Girls, for example, were much more likely to like going to school, to think the work was very good, to report that they behaved well at school and that their teachers concurred with this perception, and to say that other girls in their class behaved well. By contrast there was, in fact, only one item where the boys' responses were more positive than those of girls and, interestingly, this was one where there was a considerable difference of perception between the two sexes. Over half the boys in the sample thought the boys in their class behaved well, but only a quarter of the girls.

While this research is primarily interested in areas where boys' and girls' perceptions differ, it is worth recording that on roughly one third of the questionnaire items (10 in all) the responses of the two sexes did not differ at statistically significant levels. It is notable, however, that on most of the items listed in the first section of the table girls' responses were still a little more favourable than those of boys. In short, these primary school girls seem to have been generally more positive about various aspects of school and themselves than their male counterparts.

The discovery of differences between the two sexes across a range of items is of interest but we were particularly interested in whether different pupils had different patterns of response to schooling. The next stages of the data analysis therefore looked for underlying factors which could be said to represent key features of the attitude data, and then tried to establish whether pupils could be grouped according to their responses.

### **The process of data reduction: the factor analysis stage**

Factor analysis groups together similar response items and can produce a reduced and more manageable set of underlying variables or factors for further analysis. The earlier Scottish work (discussed above) using the same questionnaire had suggested there might be four underlying factors (see Thomas *et al.*, 2000, Table 4).

Encouragingly, our factor analysis reproduced the same basic factor structure as the Scottish study.<sup>2</sup> There was, of course, no guarantee that it would do so. The level of association between each item and the factors identified through the process can be assessed by calculating factor loadings. Similar to a correlation coefficient, a small value (approximately 0) indicates that the item in question is not associated with a specific factor, while a large value (approaching 1) indicates the item is exclusively related to that factor. Table 2 shows the factor loadings of items that contributed to factors identified in the original study. In addition the small number of items that significantly loaded on factors 3 and 4 in this analysis (loading > 0.3) are shown.

We have termed these four factors, for ease of interpretation, engagement, relationships with peers, academic self-esteem and behaviour.<sup>3</sup> Levels of pupil engagement and academic self-esteem are likely to affect pupils' overall motivation; poor behaviour can all too easily disrupt aspects of the learning process; and relationships with peers contribute to pupils' sense of identity.

Table 2. Factors emerging from the primary pupils' responses

Questionnaire item	Factor loading
<i>Factor 1: Engagement with school</i>	
I like going to school	.755
My teacher is fair	.392
The work is boring	.550
I feel happy at school	.546
<i>Factor 2: Relationships with peers</i>	
I feel safe in the playground	.609
I feel left out of things	.545
I get bullied	.688
<i>Factor 3: Academic self-esteem</i>	
The work is too easy	-.348
My work is very good	.538
I do my best at school	.133
I can do things well	.487
My teacher thinks my work is very good	.551
I think I'm clever	.560
The work is too hard for me	.285
(My teacher thinks I behave well)	.352
<i>Factor 4: Pupil behaviour</i>	
I bully other children	.389
Grown-ups at home think I behave well	.412
I behave well at school	.767
My teacher thinks I behave well	.620
(I do my best at school)	.398
(My teacher thinks my work is very good)	.305

*Notes:* Items in brackets loaded weakly on the factors indicated in this analysis, but did not load on these factors in the original study. The factor analysis accounted for 36% of the variance.

As is desirable in a factor analysis the various factors produced by the analysis were only weakly correlated with each other. Table A2a in the Appendix shows the pattern of correlations, while Table A2b provides descriptive statistics.

There was a clear pattern of differences between the two sexes (summarised in Table A2c in the Appendix). There were large differences in favour of girls with respect to levels of engagement and pupil behaviour (both highly statistically significant). Boys, by contrast, were slightly more likely to report higher levels of academic self-esteem; while this finding was on the borderlines of statistical significance it was in line with earlier research. Meanwhile, there was no statistically significant difference between the two sexes with respect to their relationships with peers.

The next stage of the analysis was concerned with determining whether there were groups of pupils who responded in similar ways to their experiences of schooling.

## Cluster analysis

Cluster analysis is a statistical technique which divides people up into groups or clusters with the intention of ensuring that the members of any one cluster share more in common with each other than they do with members of other clusters. It is a procedure widely used in industries such as market research where there is a concern to 'segment' consumers into different groups which may need to be targeted in different ways. In the words of a standard textbook on the subject it attempts to 'maximise the homogeneity of objects within the clusters whilst maximising the heterogeneity between the clusters' (Hair *et al.*, 1998, p. 470). While the procedure is objective, it does require interpretation at a number of points.

The crucial question, of course, is how many groups might be uncovered within the data. The smaller the groups, the more members of each group will share in common with each other. But, at the same time, the more groups there are, the more difficult it is to grasp the overall picture. Researchers using the technique often conclude that there are between two and, say, a dozen different groups to be found within their data. Having just two groups may not, of course, offer sufficiently refined a picture to be useful. On the other hand, having a dozen or so may provide more complexity than is necessary or appropriate. Could smaller numbers of groups (say four, six or eight which might be more manageable) be relied on to provide reasonably good fits to the data without losing too much precision? Cluster analysis programmes provide statistical 'advice' to inform decisions about how many groups there are. The final stage of a cluster analysis provides a technical solution to this question. Unfortunately, the approach does not comment on whether what it has produced is meaningful. This is a matter for researchers to interpret in terms of salient differences between the various groups and within the context of previous research.

## The clusters

The procedures we adopted for the cluster analysis were standard procedures using a hierarchical clustering method. The diagnostic statistics suggested that there were several cluster solutions, which could be seen as crucial steps in the process of reducing the number of groups. These 'signals' occurred at the 12-cluster, seven-cluster and five-cluster stages. Because we wanted to explore the patterning of the groups across individual primary schools (and were aware of the inevitably small numbers in each of the schools), we were disposed towards the five-cluster solution.

Table 3 provides the relative positions of the members of each cluster in relation to the four factor scores—behaviour, academic self-esteem, engagement and relationships with peers—for the five-cluster solution.

## The cluster types

We turn now to the task of interpreting the clusters, starting with the two which appear from reading across Table 3 to be the furthest apart: Clusters 5 and 3.

Table 3. Relative positions of the five clusters in relation to behaviour, academic self-esteem, engagement and relationships with peers

Cluster	Behaviour	Academic self-esteem	Engagement	Relationships with peers
1. Socially engaged but disaffected	Below average	Below average	Well below average	Above average
2. Committed but lacking self-esteem	Above average	Well below average	Well above average	Bit below average
3. Enthusiastic and confident	Well above average	Well above average	Above average	Above average
4. Moderately interested but easily bored	Below average	Above average	Above average	Above average
5. Alienated	Well below average	Bit below average	Below average	Long way below average

*Notes:* for the purposes of presentation the statistics have been put into the form of written descriptions. Further information is provided in the Appendix in Tables A3A and A3B.

Cluster 5 scored below average on all four factors. Pupils in this group reported that they were less engaged with school than others and had lower academic self-esteem across all our items. At the same time their reported behaviour fell well below the norm. They also stood out from the other groups with respect to their relationships with peers, being especially likely to report that they were not happy at school and that they got bullied. Within the context of the primary school, and bearing in mind their age (around 10 years old), they were already exhibiting a considerable number of signs of alienation from school.

Cluster 3, by contrast, scored highly in relation both to reported behaviour and academic self-esteem. These children were engaged with school and with their peers. They saw themselves as not merely meeting their schools' demands but sometimes exceeding them. They liked school, identified with it and felt involved. Overall, they exuded considerable enthusiasm and confidence.

In three respects Cluster 1 pupils were like those in Cluster 5, only not quite so extreme. They were below average in terms of reported behaviour and academic self-esteem and well below average in relation to levels of engagement; they turned out to be the least engaged of all five groups. They were less positive about their own behaviour and were particularly negative about how others viewed them. They didn't think they were particularly clever but didn't see themselves as stupid either. They were also quite negative about what others thought of their work. However, they differed markedly from Cluster 5 in their relationships with their peers; they turned out to be among the most involved and were very unlikely to report that they were being bullied. This is a group for whom the social dimensions of schooling seem to be particularly salient (Demetriou *et al.*, 2000). We term this group the 'socially engaged but disaffected'.

Children in Cluster 4, by contrast, were most those in like Cluster 3. They were above average in terms of academic self-esteem, engagement and relationships with peers although in none of these three areas did they stand out. They differed, however, with respect to their own reported behaviour, where they were below the average. They were critical of their own behaviour but less negative about what others thought of it. Overall, this group seems to be moderately interested but easily bored at school.

Cluster 2 shared something with each of the other clusters. Like those in Cluster 3 these pupils were above average in terms of reported behaviour and in terms of engagement they exceeded Clusters 3 and 4. However, their relationships with peers were somewhat more tentative and their academic self-esteem was clearly below average, a little lower indeed than that of Clusters 1 and 5. They didn't think they were very clever but nonetheless tried to do their best at school. They are clearly committed to school but lack self-esteem.

How can Clusters 1, 2 and 4 be positioned in relation to the others? We have already suggested that Cluster 1 shares quite a lot with Cluster 5 and that Cluster 4's nearest neighbour is Cluster 3. This leaves us with Cluster 2 which, as we have remarked, is nearest on one factor or another to each of the other four in turn. If Clusters 3 and 5 can be seen as defining some kind of continuum (the enthusiastic

and confident, and the alienated, respectively), then Clusters 3 (the enthusiastic and confident) and 4 (the moderately interested but easily bored) are probably nearest neighbours, as are Clusters 5 (the alienated) and 1 (the socially engaged but disaffected). This leaves us with Cluster 2 (the committed but lacking self-esteem) located somewhere among them, although not necessarily plumb in the middle of a continuum.

There is clear evidence for the existence of Clusters 5 and 3 in the research literature previously discussed. However, while the descriptions for Clusters 1, 2 and 4 seem plausible it is difficult to recognise them in the research literature without knowledge of whether they are gender-related. It is to this issue that we now turn.

**The gendered nature of the clusters**

The clusters in Table 3 were constructed without reference to gender. Table 4a reports on the frequency of their incidence across the whole sample. There were roughly equal proportions of the sample in each of Clusters 1–4; Cluster 5 was rather smaller, making up about 12% of the total. Clusters 3 and 4 accounted for almost half (47%) of the girls in the sample but only 36% of the boys. At the other extreme Clusters 1 and 5 accounted for just under half (45%) of the boys but only around a quarter (27%) of the girls.

Table 4b suggests that while both sexes were represented in all the clusters, the composition of most of them was, to a greater or lesser extent, gendered. Clusters 1

Table 4. Incidence of cluster types broken down by sex

4a. Incidence of different clusters by sex			
Cluster	All (%)	Boys (%)	Girls (%)
Alienated (Cluster 5)	12	14	9
Socially engaged but disaffected (Cluster 1)	25	31	18
Committed but lacking self-esteem (Cluster 2)	22	19	26
Moderately interested but easily bored (Cluster 4)	19	20	17
Enthusiastic and confident (Cluster 3)	23	16	30
Total	101	100	100

4b. Gendered nature of the different clusters	
Cluster	No. of boys in cluster for every girl
Alienated (Cluster 5)	1.52
Socially engaged but disaffected (Cluster 1)	1.68
Committed but lacking self-esteem (Cluster 2)	0.73
Moderately interested but easily bored (Cluster 4)	1.21
Enthusiastic and confident (Cluster 3)	0.55
All	1.00

and 5 were heavily dominated by boys, with more than three boys in each cluster for every two girls. Cluster 3, meanwhile, was heavily dominated by girls, with almost three girls for every two boys. Both Clusters 2 and 4 were also gender-related, although not to the same extent; Cluster 2 had more girls in it while Cluster 4 had more boys. The lack of self-esteem exhibited by Cluster 2, combined with the evidence that they are more likely to be girls, and the poorer behaviour of Cluster 4, combined with the knowledge that they are more likely to be boys, enables both clusters to be identified in the previous literature.<sup>4</sup> The emergence of a group of girls who were strong on self-esteem (Cluster 3) needs to be recognised, however, as this is the opposite of Francis and Skelton's conclusion, quoted earlier, that the majority of primary schoolgirls did not value themselves.

### **Variations across primary schools**

Table 5a shows the extent to which different primary schools faced different challenges with respect to the incidence of each of the clusters. Some caution is needed in interpreting some of the percentages as, in the case of small schools, they can be based on small numbers. Nonetheless, the proportion of alienated pupils seems to vary considerably across the schools in the sample. Schools at the upper and lower quartiles, for example, differed by around 9% in the proportions of their pupils in this category; indeed, some of the differences across the schools were even more substantial.

Of course, part of the reason for such differences is attributable to the sometimes uneven distribution of boys and girls across the sample schools. Tables 5b and 5c take account of this by looking at the two sexes separately. Again a note of caution needs to be sounded about the small numbers on which some of the estimates are based. Two of the schools appeared to have no alienated boys, while two had around a third in this category (see Table 5b). There were also large differences between schools in terms of the incidence of enthusiastic and confident pupils, especially in relation to girls (see Table 5c).

Figures 1a and 1b link together information about the incidence of each of the groups across individual schools. Both show the position for the sample as a whole, a profile with which many of the schools in the sample broadly corresponded. However, in order to emphasise the extent to which different schools can face rather different challenges, it also provides evidence on a couple of other schools whose profiles differed considerably from the norm. School K (see Figure 1a) had a disproportionately large number of male pupils in Cluster 1 (socially engaged but disaffected) than the average school in the sample—but it also has a larger number of females in this group as well. Meanwhile, School V (see Figure 1b) had considerably more females in Cluster 2 (committed but lacking self-esteem) and males in Cluster 4 (moderately interested but easily bored) than the average. Differences on this scale support our expectation that individual primary schools might develop different perceptions of gender issues and choose to adopt different approaches in addressing them.

Table 5. Incidence of the five clusters across the primary schools

5a. Both sexes combined					
Cluster	Highest two schools (% of pupils)	School at upper quartile (% of pupils)	School at median (% of pupils)	School at lower quartile (% of pupils)	Lowest two schools (% of pupils)
Alienated (Cluster 5)	26, 19	16	13	7	1, 0
Socially engaged but disaffected (Cluster 1)	59, 45	35	23	19	15, 13
Committed but lacking self-esteem (Cluster 2)	31, 28	26	23	16	9, 4
Moderately interested but easily bored (Cluster 4)	37, 33	25	19	14	10, 3
Enthusiastic and confident (Cluster 3)	43, 35	29	19	13	10, 6
5b. Boys only					
Cluster	Highest two schools (% boys)	School at upper quartile (% boys)	School at median (% boys)	School at lower quartile (% boys)	Lowest two schools (% boys)
Alienated (Cluster 5)	34, 29	19	13	7	0
Socially engaged but disaffected (Cluster 1)	71, 56	47	27	20	14
Committed but lacking self-esteem (Cluster 2)	36, 32	24	19	9	0
Moderately interested but easily bored (Cluster 4)	50, 45	25	19	13	3
Enthusiastic and confident (Cluster 3)	33, 29	23	15	7	0
5c. Girls only					
Cluster	Highest two schools (% girls)	School at upper quartile (% girls)	School at median (% girls)	School at lower quartile (% girls)	Lowest two schools (% girls)
Alienated (Cluster 5)	29, 9	13	9	0	0
Socially engaged but disaffected (Cluster 1)	40, 35	29	18	9	4
Committed but lacking self-esteem (Cluster 2)	40, 38	37	23	18	8
Moderately interested but easily bored (Cluster 4)	38, 36	27	18	6	0
Enthusiastic and confident (Cluster 3)	61, 50	39	28	19	0

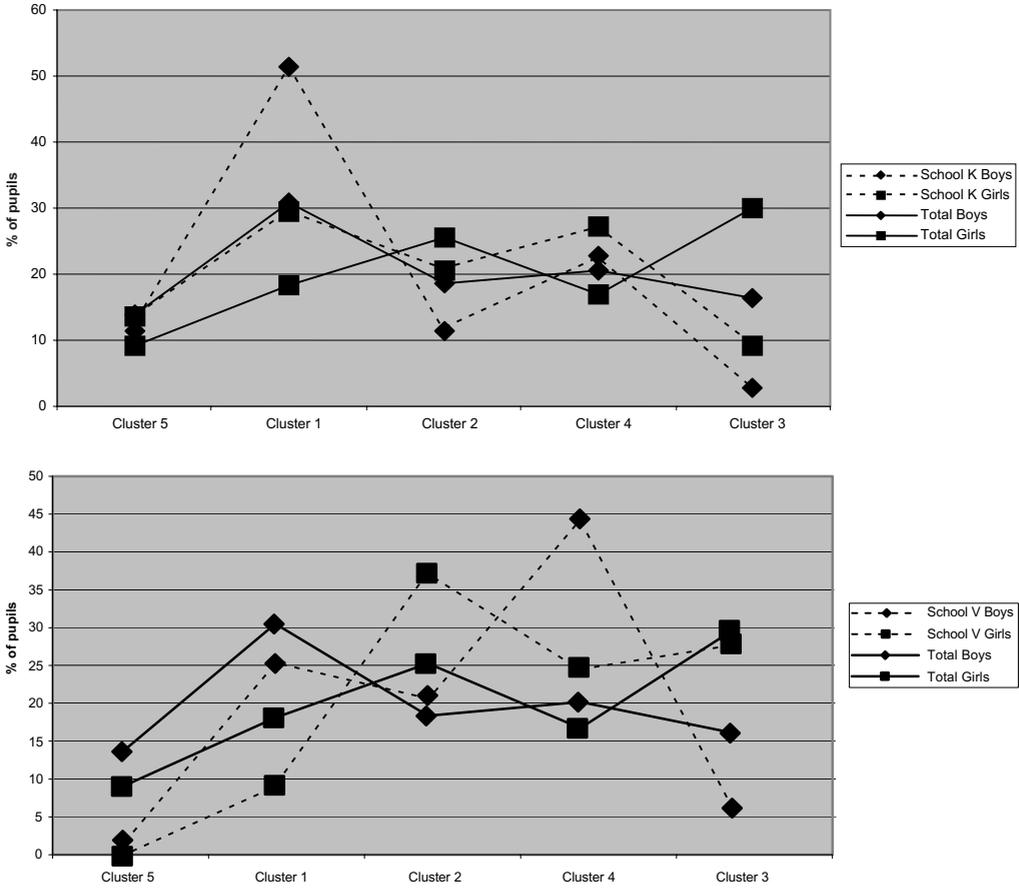


Figure 1. Selected school profiles

### Conclusions

A number of conclusions about the extent of the so-called ‘gender gap’ in primary schools and the challenges facing teachers in different schools can be drawn from this analysis. First, the evidence seems to confirm concerns raised in earlier, largely qualitative research about the existence of clearly gendered responses to schooling among this age-group. Girls seem to be a good deal more positive in their attitudes towards school than boys. Furthermore, as suggested in previous research, groups of somewhat alienated boys and generally enthusiastic and confident girls can be identified, even at the relatively early stages of schooling (around age 10) explored in this study. These findings are reassuring rather than surprising, and lend support to the view that qualitatively-generated insights can be rendered, to some extent, in quantitative terms.

Second, by looking at all pupils rather than particular groups, the analysis fills out the overall picture. Alienated pupils and enthusiastic and confident pupils, whose needs and aspirations have tended to dominate earlier discussions, can be identified;

however, these groups only make up just over one third (35%) of the pupil population. Three other sizeable groups, each constituting roughly a fifth of the total, showed up in our analyses—those moderately interested but easily bored, those socially engaged but disaffected and those committed but lacking self-esteem. Again, some evidence for these groups can be found in the qualitative literature but they have to date received rather less attention.

Third, the evidence suggests that simply taking a narrowly gendered approach to school improvement, based on some of the prevailing stereotypes, may not be the best way of addressing some of the complexities surrounding gender in primary schools. In line with the stereotypes, boys were undoubtedly more likely to be alienated for example but, nonetheless, around one in 10 girls (9%) in this study were probably in a similar position. Also, boys were more likely to be socially engaged but disaffected than their female counterparts, but almost one in five girls (18%) reported that they too experienced and felt about school in rather similar ways. Unfortunately, this research could not explore the nature of the relationships between gender, social class and ethnicity in relation to pupils' attitudes to school. We anticipate that they are, to some extent, correlated and potentially reinforcing. The strength of those correlations is, however, a matter for empirical investigation.

Finally, this research has started to address the question of the extent to which different primary schools have pupils with different dispositions towards schooling. In the majority of the schools in our sample the incidence of the five groups was, broadly speaking, similar. In a substantial minority of schools, however, one or two groups tended to dominate. This research has not addressed the question of the school's role in creating gendered identities but it underlines the need for a range of strategies aimed simultaneously at changing key elements of *all* pupils' experiences while responding sensitively to specific gender-related aspects.

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### Notes

1. The estimates for attitude items unadjusted for background factors were higher than this, at 4–12% for four attitude scales and 2–29% for individual attitude items (Thomas *et al.*, 2000, p. 296).
2. We employed a maximum likelihood with varimax rotation approach to the factor analysis. Thomas and colleagues employed a slightly different approach.
3. We have relabelled Factors 2 and 3. In the case of Factor 2 the Scottish study used the term 'pupil culture', and referred to Factor 3 as 'self efficacy', a term which is sometimes seen as interchangeable with 'academic self-esteem'. We believe the items are better described as examples of the latter concept.
4. See, for example, Licht and Dweck (1984) and Boaler (1997) in relation to confidence and self-esteem, and Sukhmandan (1999) and Warrington and Younger (2000) in relation to boys' behaviour.

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**Appendix**

Table A1. Breakdown of respondents by school and gender

School	Gender		Total
	Boys	Girls	
A	43	46	89
B	18	11	29
C	52	50	102
D	33	18	51
E	29	14	43
F	22	25	47
G	17	17	34
H	15	14	29
I	49	32	81
J	14	19	33
K	37	46	83
L	38	44	82
M	31	31	62
N	43	33	76
P	28	22	50
Q	21	24	45
R	59	61	120
S	47	36	83
T	17	14	31
U	29	31	60
V	48	32	80
Total	690	620	1310

Table A2. Summary of findings from the factor analysis of the primary pupils' responses

Table A2a. Correlations between the factors

	Engagement	Relationships	Academic self-esteem	Behaviour
Engagement	1			
Relationships	0.043	1		
Academic self-esteem	0.115*	0.044	1	
Behaviour	0.115*	0.032	0.161*	1

\*Significant at the 0.001 level.

Table A2b. Descriptive statistics for the emergent factors

Factor	Mean factor score	Standard deviation	Minimum score	Maximum score
Engagement	$3.08 \times 10^{-16}$	0.833	-2.732	1.782
Relationships with peers	$1.83 \times 10^{-16}$	0.825	-3.207	1.360
Academic self-esteem	$-6.28 \times 10^{-16}$	0.780	-2.920	2.528
Pupil behaviour	$-3.32 \times 10^{-16}$	0.845	-3.277	1.854

Note: Data presented are summaries of the distributions of the factor scores produced for each factor using the regression method. Hence these are centred on zero.

Table A2c. Results of *t* tests demonstrating gender differences in the primary pupils' responses on the factor scores

Factor	Boys mean	Girls mean	<i>t</i>	<i>df</i>	Significance
Engagement	-0.119	0.138	-5.496	1238	0.000
Relationships with peers	0.895	0.739	0.053	1238	0.958
Academic self-esteem	0.818	0.778	-1.664	1238	0.096
Pupil behaviour	-0.227	0.255	-10.446	1238	0.000

Table A3. Summary of findings from the cluster analysis of primary pupils' responses

Table A3a. Breakdown of cluster classification

Cluster	Total number of pupils	Number of boys	Number of girls
1	309	202	107
2	271	122	149
3	282	107	175
4	233	134	99
5	145	91	54

Note:  $\chi^2$  test indicates there is a significant association between cluster classification and gender ( $\chi^2 = 59.012, p < 0.001$ ).

Table A3b. Descriptive statistics for each cluster

Cluster	Characteristic	Factor			
		Behaviour	Academic self-esteem	Engagement	Relationships with peers
1	Mean	-0.338	-0.363	-0.761	0.413
	Standard deviation	0.878	0.710	0.627	0.467
2	Mean	0.243	-0.530	0.625	-0.211
	Standard deviation	0.606	0.523	0.540	0.785
3	Mean	0.819	0.695	0.285	0.231
	Standard deviation	0.310	0.559	0.674	0.526
4	Mean	-0.404	0.356	0.251	0.294
	Standard deviation	0.520	0.471	0.432	0.563
5	Mean	-0.676	-0.158	-0.498	-1.409
	Standard deviation	0.889	0.979	0.951	0.705

*Note:* ANOVA confirms that the average scores on each factor differed significantly ( $p < 0.001$ ) by cluster.