Secondary school teachers' attitudes towards and beliefs about ability grouping

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Abstract

Background. Internationally and historically considerable research has been undertaken regarding the attitudes of secondary school teachers towards different types of ability grouping. There has been no recent research taking account of the changing educational context in the UK.

Aims. This paper aims to explore secondary school teachers' attitudes and beliefs about ability grouping taking account of school type, gender, experience and qualifications.

Sample. The sample comprised over 1500 teachers from 45 schools divided into three groups based on their ability grouping practices in years 7-9. The sample included all the lower school teachers of mathematics, science and English and a random sample of teachers from other subjects in each school.

Methods. Teachers responded to a questionnaire which explored their attitudes towards ability grouping through the use of rating scales and open ended questions.

Results. The findings showed that the teachers' beliefs broadly reflected research findings on the actual effects of ability grouping, although there were significant

differences relating to the type of school they taught in and the subject that they taught. Separate analysis of school types showed that length of time teaching, individual school differences and teacher qualifications were also significant predictors of attitudes.

Conclusions. Teachers' beliefs about ability grouping are influenced by the type of groupings adopted in the school where they work, the subject that they teach, their experience and qualifications. As pedagogical practices are known to be influenced by beliefs these findings have important implications for teacher training.

Secondary school teachers' attitudes towards and beliefs about ability grouping

Introduction

Earlier studies of teachers' attitudes towards structured ability grouping in the USA (NEA, 1968; McDermott, 1976; Wilson & Schmidts, 1978), Sweden (Husen and Boalt, 1967), the UK, (Daniels, 1961a, 1961b; Jackson, 1964, Barker-Lunn, 1970) and Israel (Ministry of Education, 1965; Guttman et al, 1972) have revealed that teachers generally hold positive attitudes towards teaching classes where pupils are grouped by ability, although variations have been reported based on teachers' prior experience and the subject that they teach.

In the UK in the 1970s, when mixed-ability teaching was innovatory, teachers who had direct experience of it tended to hold more favourable attitudes towards it (Newbold, 1977; Reid et al, 1982). The advantages of mixed ability teaching were seen largely in social terms, while the disadvantage was perceived to be the difficulty of providing appropriate work for pupils of high and low ability in the same class. Those who were critical of mixed-ability teaching suggested that it failed to motivate and increase the achievement of the highly able, although the less able were perceived to benefit. Experienced teachers appeared to be more supportive of mixed ability teaching (Clammer, 1985) but they often found it more difficult to put into practice than those who had been recently trained to adopt such practices (Reid et al., 1982).

Differences in teachers' attitudes towards mixed ability teaching have also been reported depending on the subject that they teach (Reid et al, 1982). Humanities have tended to be perceived as suitable for mixed ability teaching whereas mathematics and modern foreign languages have tended to be perceived as inappropriate. Scientists occupy a middle position. Those subjects where mixed ability teaching was perceived as problematic tended to require correct answers and a grasp of abstract concepts (Reid et al., 1982).

Historically, teachers have indicated preferences for teaching high ability groups (Hargreaves, 1967; Lacey, 1970; Findlay & Bryan, 1975; Ball, 1981; Finley, 1984), in some cases competing against each other in order to be able to do so (Finley, 1984). This may be because pupils in lower ability classes tend to have more negative attitudes towards school and often exhibit poor behaviour in the classroom which makes them more difficult to teach (Hargreaves, 1967; Schwartz, 1981; Finley, 1984; Taylor, 1993). Certainly, teachers of high ability groups have tended to be more enthusiastic about teaching (Rosenbaum, 1976) and have reported feeling more efficacious (Raudenbush, Rowan & Cheong, 1992). However, this effect disappeared when the level of pupil engagement was controlled. Perhaps teachers find it difficult to generate interest in learning in pupils in lower ability groups and the resulting lack of engagement undermines their sense of efficacy. Other early research showed that teachers who consistently taught low ability groups tended to become demoralised over a period of time (Hargreaves, 1967; Finley, 1984).

Teachers' attitudes towards teaching low ability groups may have contributed to the alienation of pupils in those groups. Pupils from high ability groups tend to exhibit pro-social behaviour and it is this, rather than their academic achievement, which seems to shape teachers' behaviour towards them (Hargreaves, 1967; Lacey, 1970; Ball, 1981; Finley, 1984). Teachers have also been shown to interact with high ability groups more frequently and positively than they do with low ability groups (Harlen and Malcolm, 1997; Sorenson and Hallinan, 1986; Gamoran and Berends, 1987). However, in some schools, presumably where the ethos is supportive of pupils of all abilities, there is some evidence that teachers of low stream students do view them positively (Burgess, 1983, 1984). In the current UK educational context, where some teachers choose to specialise in teaching those with special educational needs the situation may be different.

Much of the UK research cited above was undertaken when the educational system was highly selective; all pupils were assessed at age 11 and on the basis of their test performance either attended grammar or secondary modern schools. In those schools the most commonly adopted system of pupil grouping was streaming, where pupils were put into classes on the basis of their overall ability. When research demonstrated that selection and streaming had little positive effect on academic performance and could be detrimental to the personal and social educational outcomes of some pupils (see Hallam and Toutounji, 1997; Harlen and Malcolm, 1998; Sukhnandan and Lee, 1998, Ireson and Hallam, 1999 for reviews) the 11+ examination was largely abandoned and schools moved towards alternative forms of grouping pupils, banding, setting and mixed ability teaching. The aim of this research was to explore teachers' attitudes towards and beliefs about ability grouping within this changed educational context.

Methodology

A stratified sample of 45 mixed gender secondary comprehensive schools was selected for the study, representing a range of grouping practices, intake and location spreading from London and the Southern counties of England to East Anglia and South Yorkshire.

The sample comprised three levels of ability grouping in the lower secondary school (Years 7 to 9), with 15 schools at each level:

'Mixed Ability Schools'	predominantly mixed ability classes for all subjects, with setting in no more than two subjects in Year 9.
'Partially Set Schools'	setting in no more than two subjects in Year 7, increasing to a maximum of 4 subjects in Year 9.
'Set Schools'	streaming, banding or setting in at least four subjects from Year 7.

All schools had received satisfactory inspection reports during the three years before the start of the project. Steps were taken to balance the three groups of schools in terms of their size and the social mix of their intake, using free school meals as an indicator of social disadvantage. The mixed ability schools had a slightly more socially disadvantaged intake than the Set Schools. On average, the set schools were slightly smaller than the other two groups. There was good overlap across groups for both distributions.

Teacher data: All heads of department and all English, maths and science teachers of pupils in years 7, 8 and 9 and a sample of lower school teachers of other subjects completed a questionnaire. The questionnaire explored teachers' attitudes towards ability grouping and their perceptions of the main problems in teaching ability grouped and mixed ability classes. It was developed from the findings of previous research on teachers' attitudes towards ability grouping. A series of statements were generated and piloted with a group of teachers. Those which were reported by the teachers to best represent their views and which discriminated strongly between different attitudes were included in the final version of the question. The statements are set out in the tables of results. Teachers responded on a five point rating scale to each statement. Open questions were also included which enabled teachers to express their beliefs in their own words.

The sample : Data were collected from over 1500 secondary school teachers in the 45 secondary comprehensive schools. The questionnaires were completed during meetings of staff which had been convened by the senior management team in each school. This ensured a 100% response rate from teachers attending the meetings. Twenty-three per cent of the sample were between the ages of 20 to 29, 23% between 30 and 39, 35% between 40 and 49 and 16% over 50. Just over half of the sample were female (53%). Most of the teachers were educated to degree level, 59% had a PGCE, 21% a Certificate in Education and 13% a higher degree.

Findings

Perceived effects of different grouping systems on able children

In the questionnaires teachers were asked to indicate the extent to which they agreed with a number of statements about the effects of ability grouping on more able pupils. Table 1 provides details of the statements in the questionnaire and gives the overall frequency counts for all of the teachers in response to these statements. It also provides a breakdown by type of school. The responses showed that there was overall agreement that setting ensures that brighter children make maximum progress and to a lesser extent that setting prevents brighter children being inhibited by negative peer pressure. There was much less agreement that bright children are held back in mixed ability classes. There were significant differences in the responses to these questions from teachers in each type of school. Those in the set and partially set schools gave responses which demonstrated more positive attitudes towards ability grouping than those in schools where there was a greater proportion of mixed ability teaching.

Table 1 about here

In response to the open questions, teachers volunteered their own views about the effects of different types of ability grouping on able children. Some illustrative examples are given below which are closely related to the first and third statements in Table 1.

> I have a few reservations about mixed ability teaching because the higher ability pupils are not stretched to their full potential. However we do very

well with the lower ability in the classroom. (Science teacher, mixed ability school)

I would move towards more setting because it enables pupils' curriculum needs to be better matched, reduces brighter children being inhibited by peer pressure or slower children having self esteem affected, increases student (and teacher) motivation. (Mathematics teacher, partially set school)

I have reservations about mixed ability practices. One student in my tutor group, a straight A student when he arrived in year 7, is now a school refuser because of bullying and negative peer attitudes towards him. (Music teacher, mixed ability school)

Perceived effects of ability grouping on personal and social development

Table 2 gives a detailed account of the frequencies of the responses made in relation to questionnaire statements relating to self-esteem, stigmatisation, children's perceptions of their own ability, social adjustment and motivation. There was overall disagreement with the statement that pupil self-esteem is unaffected by ability grouping but the responses to most statements were significantly differentiated by the type of school where the teacher worked. Those working in schools where there were more mixed ability grouping procedures tended to view setting in a more negative light in relation to the social outcomes of education.

Table 2 about here

The responses to the open questions supported the data from the rating scales. Most teachers were aware of the possible negative effects of highly structured ability grouping on self esteem and the way that mixed ability teaching might ameliorate them. Illustrative examples are given below.

> I believe that it is too early in year 7 to label pupils as bottom set. This will have a negative effect on their self-esteem. (Geography teacher, set school)

> All groups in this school are mixed ability. The price paid for setting or banding is too high, i.e. reduction in self-esteem, sink groups, fear of failure. Students needs can be met successfully with good, well planned, differentiated work with clear targets. (Biology teacher, mixed ability school)

> Years of experience have convinced me that this (mixed ability) is the most effective system academically, socially and personally. High self-esteem is in my opinion at the heart of successful learning and living. (English teacher, mixed ability school)

Some teachers highlighted the polarisation that could occur through the adoption of rigid ability setting.

> I have quite a lot of reservations about the current system (setting) as it results in social barriers and an ability class system within the school. The more able pupils are seen as swots and squares and less able pupils are seen as thickies, idiots, etc. Stereotyping leads to low self-esteem in lower groupings and an air of arrogance with the able. (Religious education teacher, set school)

Perceived inequity of ability grouping

Table 3 displays the responses made by the teachers in relation to the equity of ability grouping structures. Overall, there was a general tendency to disagree that setting benefited the more able pupils at the expense of the less able, that mixed ability teaching in reality only benefited the average child and that mixed ability teaching benefited the less able pupils academically at the expense of the more able. There was very strong agreement that mixed ability classes provided the less able pupils with positive models of achievement. There were significant differences in responses to the statements between teachers working in schools adopting different ability grouping structures, particularly in relation to issues of opportunity and fairness.

Table 3 about here

Perceived effects of ability grouping on discipline and disaffection

Table 4 displays the responses to statements about the effects of different kinds of ability grouping on discipline and disaffection from school. There was strong agreement from teachers across all types of school that there were more discipline problems in the lower ability classes when setting procedures were adopted. Opinion was divided as to whether there were more discipline problems in mixed ability classes.

Table 4 about here

In the responses to the open questions, teachers indicated that setting could have an impact on disaffection and several suggested that mixed ability teaching could overcome this.

> Mixed ability is best. Pupils already know between them the ones with low and high ability. Grouping them only serves to emphasise the lack of ability of those in the lower ability classes. These pupils then become disaffected at a very early stage and I would like to avoid or delay their disaffection to as late as possible. (Mathematics teacher, mixed ability school)

> I've worked in several schools where there's heavy setting, ten sets, start the most able set 1 and the least able in 10. Nobody wants to teach set 10, well probably sets 8, 9 and 10 don't feel very good about themselves at all. It often concentrates behaviour problems. The kids tend to rattle

around in these groups of quite challenging youngsters for the whole of their time, virtually from the minute they come into school and I think you end up with a real problem about disaffection. (English teacher, mixed ability school)

Beliefs about the effects of ability grouping on teaching

Teachers beliefs about the effects of ability grouping on their teaching are given in Table 5. There was no consensus that setting leads to teachers ignoring the fact that a class always contains a range of abilities or that only very good teachers can teach mixed ability classes successfully. There was strong overall agreement that teaching and classroom management are easier for the teacher when classes are set and that setting enables pupils' curriculum needs to be better matched, although there were significant differences in responses from teachers working in schools adopting different grouping procedures.

Table 5 about here

Subject domains considered appropriate for mixed ability teaching

Teachers were asked which subjects they felt were suitable for teaching in mixed ability classes in years 7, 8 and 9, in years 7 and 8 only, in year 7 only or not at all. Table 5 illustrates the responses. English and humanities were the subjects considered most suitable for mixed ability teaching. Those considered most unsuitable were

mathematics and modern foreign languages. However, there was a tendency for those teachers working in schools where mixed ability teaching was the grouping structure in operation to support mixed ability teaching more than those in the schools with more setting.

Table 6 about here

Factors affecting attitudes to ability grouping

An overall attitude to setting scale was created by summing responses to the attitudinal statements described above. Where necessary numerical responses were reversed so that all responses were in a similar direction. An overall high score indicated a positive attitude towards setting.

The mean attitude to setting scores for teachers in the set and partially set schools were almost identical, 93.6 (SD = 16.4) (partially set) and 92.3 (SD = 15.1) (set). The mean for the mixed ability schools was much lower (84.6, SD = 18.5). This difference was statistically significant ($F = 37.02$; $df = 2,1348$, $p = .0001$). There were no significant gender or age differences in teachers' overall attitudes towards setting. There were significant gender differences in response to only four statements. These were very small and showed no consistent pattern. Females agreed more strongly that setting stigmatised children perceived as less able (means: female 2.53, male 2.7; $t = 2.79$, $df = 1, 1454$, $p = .005$). There was stronger agreement among female teachers that setting ensures that higher ability children make maximum progress

when setted (means: female 2.21, male 2.33; t = 2.1, df = 1,1463, p = .03). Males agreed more strongly that setting leads teachers to ignoring the range of abilities in the class (means: females 3.4, males 3.15; t = -4.3, df = 1, 1540, p = .0001) and that only very good teachers can teach mixed ability classes successfully (means: males 2.85, females 3.0; t = -2.6, df = 1, 1534, p = .01)

Using the attitude to setting measure as the dependent variable, step wise multiple regression was undertaken to establish which factors would best predict teachers' attitudes. Two factors were found to be important. The first was type of school, mixed ability, partially set or set, (standardised beta weight .225) the second was the subject taught (standardised beta weight .078). This gave a multiple R of .239 accounting for slightly more than 5% of the variance (F = 29.13, df = 2,962, p = .0001).

When multiple regression was undertaken for type of school separately, slightly different patterns emerged. In the Set schools the significant predictors were the individual school (beta weight -.128) and the subject taught (beta weight .109) (R = .167, F = %.14, df = 1,359, p = .006). In the partially set schools length of time teaching at the school was the only predictor (beta weight .175) (R = .175, F = 9.36, df = 1,298, p = .002). In the mixed ability schools the subject taught (beta weight .21), the length of time teaching at the school (beta weight -.126) and whether the teacher had a higher degree (beta weight -.119) predicted attitude toward setting (R = .274, F = 8.08, df = 1,300, p = .00001) The shorter time the teacher had been teaching in a mixed ability school the more positive their attitudes towards setting. In relation to a higher level degree, e.g. masters or doctoral qualification, the higher the level of

the degree the less likely the teacher was to favour setting. No significant differences were found in relation to gender or age.

Discussion

Overall, the teachers' beliefs reflected previous research findings relating to the actual effects of ability grouping. They believed that ability grouping enabled the more able pupils to maximise their attainment and insulated them from negative peer pressure. Those of lower attainment were perceived as more likely to develop low self-esteem, become alienated and as result exhibit more difficult behaviour when they were placed in structured ability groups. Mixed ability teaching was seen to benefit not only the social adjustment of the less able but of all children. Despite this, there was little overall agreement between teachers of the relative equity of the different systems of grouping. With regard to their own practice, teaching and classroom management were perceived to be easier with structured ability groupings as was meeting the curriculum needs of all pupils. For teachers, there were considerable personal benefits to be derived from the adoption of structured grouping procedures.

These shared beliefs were overlaid by differences relating to school type. Teachers employed in schools which adopted high or moderate levels of setting expressed beliefs which were more positive toward structured ability grouping than teachers in schools where a greater proportion of mixed ability teaching was undertaken. These differences were highly significant in relation to almost all the statements made. Whether this indicates that teachers' views are influenced by their current working environment or whether they search out an environment which is conducive to their

philosophy of education cannot be established from the current analysis. It is likely that there are complex interactions between the two.

There were also differences in the extent to which different subjects were perceived as appropriate for mixed ability teaching. Mathematics and modern foreign languages were perceived as requiring grouping based on attainment. English and humanities were perceived as appropriate for mixed ability teaching. The reasons for these differences are likely to be related to the extent to which learning in these subjects is perceived as linear and building directly on prior knowledge and the extent to which differentiation can occur through learning outcomes rather than the setting of differentiated tasks. This is clearly an issue which requires further exploration.

When the analysis predicting attitudes towards ability grouping was undertaken separately for school type, individual schools emerged as influential in determining the attitudes of their staff. School ethos seemed to be an important force in determining teachers' beliefs. This was further reinforced by the finding that teachers who had been teaching in mixed ability schools for relatively short periods of time held more positive attitudes towards ability grouping than longer established teachers. However, schools were not the only influence on teachers' beliefs. Those with a higher degree (Masters/PhD) in education, expressed more negative attitudes towards ability grouping than those with lower level qualifications. Possibly greater knowledge of the research literature played a part in shaping their views. In addition, the variables considered in the analysis accounted for a relatively small proportion of the variation between teachers' beliefs regarding ability grouping. This suggests that

many of the influences on teachers' thinking about issues such as ability grouping are external to their immediate working and professional environment.

What are the implications of these findings? We know that teachers' beliefs affect their teaching practices (Clark and Peterson, 1986; Carlgren et al., 1994). We also know that different types of ability grouping have differential positive and negative effects on academic, personal and social educational outcomes for different groups of pupils. No single system offers equity. However, the weaknesses of different systems can be ameliorated if schools and the staff in them are aware of the issues and take positive steps to reduce their negative effects. For instance, where mixed ability teaching practices are adopted high quality differentiated materials which support the teacher in providing work at an appropriate level need to be made available. Teachers also need to reward effort rather than attainment, in order to reduce the stigmatisation of able pupils. In schools adopting setting, success in all curricular and extra-curricular activities needs to be valued not only academic achievement. Teachers should avoid making public comparisons between ability groups, value the progress of all pupils and treat all groups with equal respect. They need to be aware that the messages, verbal and nonverbal, that they convey to pupils about the extent to which they and their efforts are valued determine whether pupils perceive the school as having a positive inclusive ethos. Where this is not the case pupil alienation will increase leading to increased discipline difficulties. The current emphasis in teacher education on preparing teachers to deliver the curriculum has led to a reduction in opportunities to develop understanding of such issues. In the long term this may be counterproductive for individual teachers and for the development of school environments which support learning for all students.

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Table 1

Percentage responses to statements related to the academic performance of able pupils by different types of ability grouping practices

Statements	Type of ability grouping	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Bright children are neglected or held back in mixed ability classes	MA school	7.7 (39)	33.4 (169)	15.8 (80)	32.8 (166)	9.7 (49)
	PS school	15.2 (77)	41.6 (210)	15.2 (77)	20.8 (105)	5.1 (26)
	Set school	12 (73)	36.5 (222)	20.7 (126)	26.8 (163)	3.1 (19)
$x^2 = 60.35$, df = 8, p = .0001	Total	11.7 (189)	37.1 (601)	17.5 (283)	26.8 (434)	5.8 (94)
Setting ensures that brighter children make maximum progress	MA school	14 (71)	40.7 (206)	18.6 (94)	22.5 (114)	4 (20)
	PS school	26.1 (132)	47.5 (240)	13.5 (68)	9.9 (50)	2 (10)
	Set school	26.5 (161)	50.5 (307)	12.8 (78)	8.4 (51)	1.6 (10)
$x^2 = 91.78$, df = 8, p = .0001	Total	22.5 (364)	46.5 (753)	14.8 (240)	13.3 (215)	2.5 (40)
Setting prevents brighter children being inhibited by negative peer pressure	MA school	8.9 (45)	40.1 (203)	22.7 (115)	21.3 (108)	5.5 (28)
	PS school	19 (96)	42 (212)	18.4 (93)	16 (81)	3 (15)
	Set school	16 (97)	42.4 (258)	21.4 (130)	18.6 (112)	1.5 (9)
$x^2 = 39.63$, df = 8, p = .0001	Total	14.7 (238)	41.6 (673)	20.9 (338)	18.6 (301)	3.2 (52)

Table 2
Percentage responses to statements regarding the perceived personal and social effects of different kinds of ability grouping

Statements	Type of ability grouping	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Pupil self-esteem is unaffected by ability grouping	MA school	1.2 (6)	11.3 (57)	20.2 (102)	45.5 (230)	20.8 (105)
	PS school	1.6 (8)	12.9 (65)	24.2 (122)	45.5 (230)	14.5 (73)
	Set school	.8 (5)	13.2 (80)	22.5 (137)	49 (298)	13.7 (83)
NS	Total	1.2 (19)	12.5 (202)	22.3 (361)	46.8 (758)	16.1 (261)
Setting has a damaging effect on the self-esteem of those in lower sets	MA school	18.4 (93)	40.5 (205)	17 (86)	19 (96)	4.3 (22)
	PS school	9.7 (49)	34.1 (172)	20 (101)	30.3 (153)	4.4 (22)
	Set school	9 (55)	36.3 (221)	20.2 (123)	30.4 (185)	3.3 (20)
$x^2 = 47.31$, df = 8, p = .0001	Total	12.2 (197)	36.9 (598)	19.1 (310)	26.8 (434)	4 (64)
Setting children stigmatises those perceived as less able	MA school	27.1 (137)	36.6 (185)	12.8 (65)	19 (96)	3.2 (16)
	PS school	11.1 (56)	38.6 (195)	18.4 (93)	23.8 (120)	6.7 (34)
	Set school	9.7 (59)	45.1 (274)	15.8 (96)	22.2 (135)	6.3 (38)
$x^2 = 85.01$, df = 8, p = .0001	Total	15.6 (252)	40.4 (654)	15.7 (254)	21.7 (351)	5.4 (88)
In mixed ability classes the less able pupils are more aware of what they are unable to do. They are aware that other pupils are doing different work	MA school	6.5 (33)	32.4 (164)	16.4 (83)	32.4 (164)	10.7 (54)
	PS school	7.9 (40)	40.8 (206)	17.8 (90)	26.1 (132)	6.5 (33)
	Set school	6.9 (42)	43.4 (264)	17.8 (108)	25.5 (155)	4.4 (27)
$x^2 = 31.71$, df = 8, p = .0001	Total	7.1 (115)	39.2 (634)	17.4 (281)	27.9 (451)	7 (114)
Less able children compare themselves unfavourably to more able children in mixed ability classes	MA school	2.2 (11)	37.4 (189)	20.8 (105)	34 (172)	5.1 (26)
	PS school	6.1 (31)	44.2 (223)	22 (111)	22.8 (115)	3 (15)
	Set school	4.1 (25)	42.4 (258)	27.5 (167)	23.7 (144)	1.3 (8)
$x^2 = 47.5$, df = 8, p = .0001	Total	4.1 (67)	41.4 (670)	23.7 (383)	26.6 (431)	3 (49)
Mixed ability grouping leads to better social	MA school	15.8 (80)	47 (238)	20.8 (105)	13.2 (67)	2 (10)
	PS school	9.7 (49)	43.4 (219)	27.9 (141)	15.2 (77)	2.8 (14)

adjustment for the less able pupils	Set school	7.1 (43)	43.6 (265)	28.9 (176)	16.3 (99)	3.3 (20)
$x^2 = 33.18$, df = 8, p = .0001	Total	10.6 (172)	44.6 (722)	26.1 (422)	15 (243)	2.7 (44)
Mixed ability grouping leads to better social adjustment of all pupils	MA school	18.6 (94)	44.3 (224)	22.5 (114)	11.7 (59)	1.2 (6)
	PS school	7.9 (40)	41.6 (210)	27.9 (141)	18 (91)	2.8 (14)
	Set school	5.8 (35)	41.3 (251)	32.4 (197)	17.8 (108)	1.6 (10)
$x^2 = 70.98$, df = 8, p = .0001	Total	10.4 (169)	42.3 (685)	27.9 (452)	15.9 (258)	1.9 (30)
Overall motivation is higher when pupils are in mixed ability classes.	MA school	8.7 (44)	28.9 (146)	29.6 (150)	26.9 (136)	5.3 (27)
	PS school	4.2 (21)	15.8 (80)	34.7 (175)	33.9 (171)	9.7 (49)
	Set school	3.3 (20)	18.8 (114)	31.9 (194)	36.3 (221)	8.9 (54)
$x^2 = 57.58$, df = 8, p = .0001	Total	5.3 (85)	21 (340)	32.1 (519)	32.6 (528)	8 (130)
Knowing they are in a low set leads to pupils giving up.	MA school	12.3 (62)	34.2 (173)	17.8 (90)	29.2 (148)	5.5 (28)
	PS school	7.1 (36)	28.5 (144)	16.8 (85)	39.4 (199)	6.5 (33)
	Set school	6.9 (42)	31.1 (189)	17.1 (104)	38.2 (232)	5.8 (35)
$x^2 = 23.41$, df = 8, p = .003	Total	8.6 (140)	31.3 (506)	17.2 (279)	35.8 (579)	5.9 (96)

Table 3

Percentage responses to statements concerning perceptions of issues of equity in relation to the grouping of pupils by ability

Statements	Type of ability grouping	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Setting benefits the more able pupils at the expense of the less able	MA school	8.3 (42)	30 (152)	12.8 (65)	32 (162)	15.8 (80)
	PS school	6.9 (35)	17.2 (87)	15.2 (77)	35.2 (178)	24.2 (122)
	Set school	5.8 (35)	22.7 (138)	16.8 (102)	32.1 (195)	22 (134)
$x^2 = 34.94$, df = 8, p = .0001	Total	6.9 (112)	23.3(377)	15.1 (244)	33 (535)	20.8 (336)
Mixed ability grouping gives each child a fair chance	MA school	10.3 (52)	35.6 (180)	18.2 (92)	26.5 (134)	8.9 (45)
	PS school	5.7 (29)	20.6 (104)	20.6 (104)	33.7 (170)	17.8 (90)
	Set school	2.8 (17)	20.2 (123)	22.2 (135)	38.5 (234)	15 (91)
$x^2 = 87.01$, df = 8, p = .0001	Total	6.1 (98)	25.1 (407)	20.4 (331)	33.2 (538)	14 (226)
Mixed ability teaching in reality only benefits the average child	MA school	3 (15)	18 (91)	19.4 (98)	42.3 (214)	16.4 (83)
	PS school	3.4 (17)	25.5 (129)	21 (106)	36.8 (186)	11.9 (60)
	Set school	1.8 (11)	22.7 (138)	26.3 (160)	40.3 (245)	7.9 (48)
$x^2 = 34.94$, df = 8, p = .0001	Total	2.7 (43)	22.1 (358)	22.5 (364)	39.8 (645)	11.8 (191)
Mixed ability classes provide the less able pupils with positive models of achievement	MA school	11.1 (56)	51.8 (262)	21.5 (109)	13.4 (68)	1.6 (8)
	PS school	8.3 (42)	47.7 (241)	22 (111)	18 (91)	3.6 (18)
	Set school	8.4 (51)	51.3 (312)	21.7 (132)	15.6 (95)	2.1 (13)
NS	Total	9.2 (149)	50.3(815)	21.7 (352)	15.7 (254)	2.4 (39)
Mixed ability teaching benefits the less able pupils academically at the expense of the more able	MA school	1.2 (6)	18.6 (94)	22.7 (115)	48 (243)	9.1 (46)
	PS school	3 (15)	22.6 (114)	27.1 (137)	38.6 (195)	6.9 (35)
	Set school	1.6 (10)	24 (146)	27.6 (168)	41.3 (251)	4.1 (25)
$x^2 = 27.13$, df = 8, p = .001	Total	1.9 (31)	21.9 (354)	25.9 (420)	42.6 (689)	6.5 (106)

Table 4

Percentage responses to statements related to the effects of different kinds of ability groupings on discipline and disaffection

Statements	Type of ability grouping	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
In general there are more discipline problems in mixed ability classes	MA school	5.5 (28)	23.3 (118)	21.1 (107)	26.3 (133)	21.5 (109)
	PS school	8.5 (43)	28.3 (143)	22.8 (115)	27.7 (140)	10.3 (52)
	Set school	5.8 (35)	21.2 (129)	24.2 (147)	34.2 (208)	12.2 (74)
$x^2 = 45.7$, df = 8, p = .0001	Total	6.5 (106)	24.1 (390)	22.8 (369)	29.7 (481)	14.8 (235)
Where classes are set there are more discipline problems in the lower ability classes	MA school	23.5 (119)	39.3 (199)	17.6 (89)	14.6 (74)	3.8 (19)
	PS school	17.6 (89)	42.8 (216)	14.5 (73)	18.2 (92)	5 (25)
	Set school	20.4 (124)	44.2 (269)	15.3 (86)	16.3 (98)	3.9 (24)
NS	Total	20.8 (332)	42.2 (684)	15.3 (248)	16.3 (264)	4.2 (68)
Where classes are set there is more truancy from pupils in the lower sets	MA school	5.1 (26)	25.3 (128)	41.7 (211)	17.4 (88)	6.1 (31)
	PS school	4.4 (22)	18.2 (92)	39.2 (198)	26.7 (135)	6.9 (35)
	Set school	3.9 (24)	20.6 (125)	40 (243)	25.7 (156)	5.1 (31)
$x^2 = 21.07$, df = 8, p = .007	Total	4.4 (72)	21.3 (345)	40.3 (652)	23.4 (379)	6 (97)
Where classes are set there are more exclusions of pupils in the lower sets	MA school	4.9. (25)	26.7 (135)	43.5 (220)	16.6 (84)	3.6. (18)
	PS school	4.8 (24)	23.8 (120)	37 (187)	23.2 (117)	3.8 (19)
	Set school	4.1 (25)	30.1 (183)	40.1 (244)	19.4 (118)	2.5 (15)
NS	Total	4.6 (74)	27.1 (438)	40.2 (651)	19.7 (319)	3.2 (52)

Table 5

Percentages (and number) of responses to statements relating to effects of ability grouping on teaching

Statements	Type of ability grouping	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Setting leads to teachers ignoring the fact that a class always contains a range of abilities	MA school	7.1 (36)	34.6 (175)	19.6 (99)	29.1 (147)	8.9 (45)
	PS school	4 (20)	24.2 (122)	15 (76)	40.8 (206)	14.9 (75)
	Set school	2 (12)	24.8 (151)	14.1 86)	42.1 (256)	16 (97)
$x^2 = 61.61$, df = 8, p = .0001	Total	4.2 (68)	27.7 (448)	16.1 (261)	37.6 (609)	13.4 (217)
Only very good teachers can teach mixed ability classes successfully	MA school	9.5 (48)	29.2 (148)	24.7 (125)	28.1 (142)	7.3 (37)
	PS school	10.7 (54)	29.3 (148)	23 (116)	26.7 (135)	8.7 (44)
	Set school	8.1 (49)	31.9 (194)	24.7 (150)	27.3 (166)	6.7 (41)
NS	Total	9.3 (151)	30.3 (490)	24.2 (391)	27.4 (443)	7.5 (122)
Teaching is easier for the teacher when classes are set	MA school	10.9 (55)	42.9 (217)	19.2 (97)	21.9 (111)	4.7 (24)
	PS school	15.8 (80)	46.3 (234)	17.4 (88)	15.4 (78)	3.8 (19)
	Set school	11.3 (69)	47.7 (290)	18.6 (113)	18.6 (113)	3.3 (20)
$x^2 = 15.78$, df = 8, p = .046	Total	12.6 (204)	45.8 (741)	18.4 (298)	18.7 (302)	3.9 (63)
In mixed ability classes teachers tend to teach to the average child	MA school	3 (15)	42.5 (215)	14.6 (74)	34.2 (173)	5.5 (28)
	PS school	4.8 (24)	51.3 (259)	16 (81)	22.8 (115)	3.4 (17)
	Set school	2.6 (16)	51.2 (311)	18.9 (115)	23.5 (143)	2.8 (17)
$x^2 = 34.84$, df = 8, p = .0001	Total	3.4 (55)	48.5 (785)	16.7 (270)	26.6 (431)	3.8 (62)
Setting makes classroom management easier	MA school	6.9 (35)	48.4 (245)	22.1 (112)	18.2 (92)	3.6 (18)
	PS school	13.9 (70)	52.1 (263)	15.4 (78)	14.9 (75)	2.2 (11)
	Set school	12 (73)	51.2 (311)	14.6 (89)	18.9 (115)	2.3 (14)
$x^2 = 29.02$, df = 8, p = .0001	Total	11 (178)	50.6 (819)	17.2 (279)	17.4 (282)	2.7 (43)
Setting enables pupils' curriculum needs to be better matched	MA school	15.2 (77)	41.1 (208)	15.8 (80)	23.3 (118)	4 (20)
	PS school	25.1 (127)	47.3 (239)	(14.9) 75	8.7 (44)	2.4 (12)
	Set school	22 (134)	53.5 (325)	16.3 (99)	6.6 (40)	1.3 (8)
$x^2 = 100.73$, df = 8, p = .0001	Total	20.9 (338)	47.7 (772)	15.7 (254)	12.5 (202)	2.5 (40)

Table 6

Comparison of subjects considered appropriate for mixed ability teaching

Subject	Type of school	In years 7,8 and 9	Only in years 7 and 8	Only in year 7	No	Don't know
English	MA school	51.4 (260)	10.9 (55)	6.7 (34)	6.7 (34)	21.5 (109)
	PS school	29.7 (150)	10.7 (54)	18 (91)	15 (76)	25.5 (129)
	Set school	20.9 (127)	10 (61)	16.8 (102)	23.4 (142)	27.5 (167)
$x^2 = 168.14$, df = 10, p = .0001	Total	33.2 (537)	10.5 (170)	14 (227)	15.6 (252)	25 (405)
Maths	MA school	23.1 (117)	16.4 (83)	20 (101)	15.8 (80)	21.7 (110)
	PS school	7.7 (39)	4.4 (22)	20.8 (105)	37.6 (190)	27.1 (137)
	Set school	9.9 (60)	3.9 (24)	15.5 (94)	41.9 (255)	27.1 (165)
$x^2 = 195.27$, df = 10, p = .0001	Total	13.3 (216)	8 (129)	18.5 (300)	32.4 (525)	25.4 (412)
Combined Science	MA school	32.2 (163)	19 (96)	13.6 (69)	7.3 (37)	24.5 (124)
	PS school	11.9 (60)	10.5 (53)	24.8 (125)	22.4 (113)	28.9 (146)
	Set school	12 (73)	8.4 (51)	17.8 (108)	28.6 (174)	31.6 (192)
$x^2 = 198.22$, df = 10, p = .0001	Total	18.3 (296)	12.4 (200)	18.7 (302)	20 (324)	28.5 (462)
Modern Languages	MA school	20.8 (105)	12.5 (63)	22.1 (112)	12.1 (61)	29.4 (149)
	PS school	9.3 (47)	7.7 (39)	26.9 (136)	21.4 (108)	32.5 (164)
	Set school	9 (55)	6.1 (37)	16.8 (102)	34.5 (210)	31.4 (191)
$x^2 = 117.35$, df = 10, p = .0001	Total	12.8 (207)	8.6 (139)	21.6 (350)	23.4 (379)	31.1 (504)
Humanities	MA school	54.5 (276)	8.3 (42)	6.1 (31)	3 (15)	24.9 (126)
	PS school	40 (202)	11.1 (56)	11.3 (57)	4.8 (24)	30.5 (154)
	Set school	30.3 (184)	11.7 (71)	12.7 (77)	14.3 (87)	29.4 (179)
	Total	40.9 (662)	10.4 (169)	10.2 (165)	7.8 (126)	28.4 (459)

Word count with references 4255

Word count without references 3673