Pupil Grouping Strategies and Practices at Key Stage 2 and 3: Case Studies of 24 Schools in England

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NOTE: Since completing this work, Prof. Peter Kutnick has joined King’s College, University
of London.
Executive Summary

Introduction

The Department for Education and Skills (DfES) commissioned the University of Brighton (with partner universities Sussex, Cambridge and the Institute of Education, London) to undertake a two-part investigation into the effects of pupil grouping in schools at Key Stages (KS) 2 and 3. The two-part investigation provided: (1) an extended review of the literature that included an analysis and synthesis of current literature that would identify types of pupil grouping suited to particular pupils, the range of organisational policies regarding pupil grouping within schools that are related to different levels of performance, and subjects suited to particular types of grouping; and (2) comparative case studies that explored how grouping/organisational policy was implemented in classrooms and how this affected teaching and learning strategies, the impact of grouping on social pedagogy and learning, and planning for transition. The extended literature review (Kutnick, Sebba, Blatchford, Galton & Thorp, 2005b) was published previously by the DfES (Research Report 688). This research brief reports on the comparative case studies.

Key Findings

Grouping and its impact on the attainment of pupils

- Schools identified that the use of setting enabled them to tailor teaching for different ability pupils in order to impact on their understanding and achievement. However, the research did not find evidence to corroborate these expected achievement gains.
- In secondary schools that adopted mixed ability or part mixed ability grouping approaches, the rationale given by teachers and senior managers tended not to make reference to attainment but rather to focus on the benefits in terms of social awareness and inclusivity.
- In primary schools, which used mixed ability as the predominant organisational grouping, pupils were often seated around tables on the basis of ability and it was not possible to differentiate attainment outcomes that related directly to setting or mixed ability from these observations.

Grouping best suited to particular pupils

- In the secondary school case studies in which setting was prevalent, higher ability pupil groups tended to work for more of the time in smaller groups (of four to six pupils) and lower ability pupil groups tended to receive a much larger amount of whole class teaching.
- Pupils with special educational needs (identified by their schools) were often grouped together in lower sets or, in schools or subjects with mixed ability teaching, they were often concentrated in one or two groupings per class, and sometimes withdrawn for specific support sessions. These practices had consequences in terms of poor behaviour and disruption in the case study schools.
Classroom organisation and pupil grouping

- The classroom organisation and working experience of low ability sets was distinctly different from other sets and mixed ability groups; these low ability pupils were rarely offered the opportunity to interact with peers in pairs or small groups.
- Pupils in secondary schools reported a preference for paired work but were rarely given paired work assignments.
- In primary schools, paired seating at tables was common, although pupils’ assigned tasks tended to be individualised.
- In the primary schools, table-based small groups were the preferred arrangement across all subject areas; although this seating arrangement often conflicted with the focus of learning interactions and tasks.
- The case studies were unable to identify whether gender-based grouping was associated with attainment advantage, and teachers often regarded this practice in terms of behavioural/social control.

Subjects best suited to a particular type of grouping

- There were clear subject-based preferences for setting or mixed ability expressed in the case study schools, especially with regard to mathematics, and to a lesser extent, English, in which setting was the preferred organisational style. Humanities and Drama, on the other hand, preferred mixed ability organisational strategies. There was no evidence that either setting or mixed ability led to higher attainment in these subjects, as judged by the DfES School and College Achievement and Attainment Tables (2005).
- Whilst setting has a clear logic in terms of accelerating the understanding of higher achieving pupils and providing the opportunity to focus support and guidance for the lower achieving pupils, there remained a large and very diverse middle ‘group’ of pupils in all of the core subjects within the case study schools that did not benefit from this differentiating practice.

Teaching and learning strategies suited to particular types of pupil grouping

- In secondary schools, it was found that children in set classes were more likely to undertake ‘application of existing knowledge tasks’, whereas pupils in mixed ability classes were more likely to undertake ‘new knowledge’ and ‘practice’ tasks\(^1\). This effectively provided pupils in these classes with qualitatively different ranges of learning activities and experiences.
- In the primary school case studies, children mainly sat around tables in small groups, but tended to be assigned individual work; this strategy showed a stronger relationship to control of behaviour than learning.
- Teaching staff were cautious in their use of group work, regarding it as a potential threat to their control of the classroom.

\(^1\) For definitions of the types of task, please see footnote 11 on page 27.
Grouping and transfer/transition

• Where planning for transition to secondary school did take place, social considerations were prioritised over academic ones.
• There was no consistent pattern of strategic planning or provision for transfer found in the case schools.

Training for group work

• Teachers seemed aware that effective grouping practices in classrooms required training and application of specific skills by children, but this was not included in their planned work.

Background

Pupil grouping has been the source of debate for many years. This debate has not been helped by the range and variety of terms associated with the discussion of pupil grouping, and by the expectation that organisational types of grouping (especially seen in school and subject/departmental responses to the range of pupil ability) could be associated with particular patterns of attainment within classrooms. The extended literature review found that the combination of school, year group and subject differences in pupil organisational grouping means that there are significant variations in practices and no clear relationship to school-based achievement at either KS2 or 3. It should also be noted that even within classes that are set by attainment, there will be variations in pupil ability in each class; thus it is a questionable assumption that setting allows these pupils to be taught as a homogeneous group2. Further, as identified in the extended literature review, within-class pupil groups may vary in relation to size, composition, learning and interactive tasks assigned and whether pupils and teachers receive training that will allow pupils to engage more effectively as groups that promote learning in the classroom.

Methodology

The project aimed to investigate the nature and impact of different grouping strategies and practices on the quality of teaching and learning in schools. Seven research questions were linked to a number of themes that included: purposes of organisational and within-class grouping of pupils; grouping to promote inclusion and diversity among pupils; pedagogic strategies that may relate to particular types of within-class pupil grouping; learning tasks that may be assigned to particular within-class pupil groups; organisational and within-class grouping that may be related to particular curriculum subjects; the role and relationship of pupil grouping with regard to transfer from primary to secondary school; and whether teachers or pupils have been trained to participate more effectively in within-class grouping. While a number of the research questions were addressed in the extended review of the literature, the themes were focused upon in 24 integrated, comparative case studies (12 primary and 12 secondary schools). Selection of

2 A problem considered in Chapter 4 of the recent White Paper, Higher Standards, Better Schools for All (DfES, 2005); this White Paper was written and disseminated after the tender requirements for the study presented here were published.
the case schools was based on a geographical spread across England. A range of innovative grouping practices in schools and a number of comparative primary and secondary schools were included in the study. Data collected with regard to the themes in each of the case schools included:

- DfES statistics (2005) on KS2 and 3 performance in core curriculum subjects;
- Interviews with school management to identify pupil grouping policies;
- Interviews with teachers to examine beliefs and experiences about the effects of different forms of pupil grouping;
- Interviews with pupils to examine beliefs and experiences about the effects of different forms of pupil grouping;
- Observation and mapping of classrooms to establish the range of within-class grouping practices used in relation to the teacher’s pedagogic approach; and
- Interviews with transition managers to identify school-based plans and actions to facilitate the transition of their pupils.

**Conclusion**

Arguments that there are distinct attainment differences that may be explained by organisational grouping strategies in departments and schools are not supported by these case studies. This finding in this study, and in the existing research literature, has led to the consideration of the importance of within-class use of pupil groups and the social pedagogic contexts of classroom learning that may promote or inhibit the academic process. This study found that pupils in the case study schools were always found to be seated/working in some form of grouping within their classrooms. The case studies also indicated that the effective use of pupil groupings within classrooms was often limited by conflicts between pupil group size/composition, assigned learning tasks and interpersonal interactions. There was only limited evidence that pupils or teachers had received training or support to work effectively within their classroom groups. Implications for school achievement are considered in light of the organisational grouping and classroom processes that characterised the case study schools.
Chapter 1: Overview of the Research

1.1 Background

Pupil grouping has been the source of debate for many years. This debate has sometimes appeared to be more concerned with promoting the ideological stance of the respective discussants rather than drawing conclusions on the basis of research evidence. Indeed research (which is reviewed briefly in 1.3.1 below) suggests that the reality is more complex and less clear, and that too strong of a focus on type of ability grouping (as an organisational strategy for whole classes, departments and schools) may misdirect consideration from what is happening within classrooms (especially in relation to teaching, learning and attitudes, within pupil groups).

The debate is made even more complex by the range and variety of terms that are associated with the discussion of pupil grouping, and how organisational types of grouping (especially setting by subject-based attainment or mixed ability) might be represented in these terms within classrooms. For example, the Office for Standards in Education (Ofsted) data³ (cited in Kutnick et al., 2005b), drawn from inspections of 566 secondary schools during 2001-02, showed that:

- less than 5% of the schools were ‘streamed’ by general academic attainment;
- the level of ‘setting’ by subject-specific attainment increased throughout Key Stage (KS) 3 from about 26% in Year 7 to 44% in Year 9 across all curriculum subjects; yet,
- a substantial proportion of subjects within schools (and a number of schools generally) used mixed ability as the basis for organising classes.

The combination of year group and subject differences in pupil organisational grouping means that there were significant variations in practices across subjects and schools at KS3. A further example from the Ofsted data found: in Year 9, 90% of mathematics lessons were set, compared to only 34% of science lessons in Year 7; and, less setting was evident in art, music, physical education and design technology. It should also be noted that even within classes that are set by attainment, there will be variations in pupil ability in each class; thus the assumption cannot be made that setting will allow these pupils to be taught as if they were all at the same attainment level: teaching/learning approaches will need to be ‘personalised’.

Initially, the concept of pupil grouping has been used in two distinct ways, as noted by Kutnick et al. (2005b). Pupil grouping has been used as:

1. an organisational principle at school and departmental levels – drawing upon associated terms of streaming, banding, setting and mixed ability; and
2. a description of various social pedagogic principles⁴ that have been researched within classrooms – noting that pupil groupings may vary in relation to size, composition, and tasks assigned such as in co-operative and collaborative groups.

Terms have been defined that describe these organisational relationships in the following way:

³ These data are based on Ofsted inspections conducted during the year and are therefore not necessarily representative of all schools.
⁴ Social pedagogy, as referred to in this study, is the social and interpersonal context within which teaching and learning takes place; this context may be seen to promote or inhibit learning in classrooms.
• Streaming: pupils are assigned to classes on the basis of overall assessment of their
general ability, usually based on prior attainment or outcomes of cognitive or other tests.
Pupils remain in their streamed classes for the majority of subjects.
• Banding: pupils are assigned to broad bands across a year group on the basis of overall
assessment of general ability. Pupils remain in the bands for the majority of subjects and it is therefore a less differentiated form of streaming.
• Setting⁵: pupils are grouped according to their ability in a particular subject. They may be
in higher or lower sets and with different peers in each subject. In practice, many pupils
tend to be in similar level sets across several subjects.
• Mixed-ability: pupils are grouped to reflect the full range of abilities for that year group.
The spread of ability depends upon the ability range that exists in the school.

(from Kutnick et al., 2005b, p.51)

Organisational grouping is an administrative device to manage the range of pupil attainment
attending a school, especially in secondary schools. Pupils may be assigned to particular classes
within specific subjects in a manner that differentiates between the range of their attainment or
integrates the range of attainment. Decisions to differentiate or integrate may be taken at school
or department level, and with regard to the year level of pupils. Organisational grouping,
though, does not provide information of pedagogic and social pedagogic concern, as it does not
attempt to describe the teaching and learning process that can only be found within classes.
Thus, within-class grouping refers to the practice and process of grouping pupils within a class
to enhance their learning and concentration. Pupils may be grouped for specific activities and
these groupings may change over time within a lesson. Within-class groupings of pupils may
also be related to attainment levels of children (within-class setting or integration) or based on
other criteria such as gender mix or a specific learning need. Within-class grouping has received
less attention in the ability grouping debate than organisational grouping practices.

Considering the policy context, the debate about pupil grouping in primary schools was re-
energised by the Curriculum Organisation and Classroom Practice in the Primary School paper
also known as the Three Wise Men report (Alexander, Rose and Woodhead, 1992). This report
focused mainly on curricular organisation, but introduced consideration of pupil grouping by
attainment within curriculum subjects and recognised various sizes of pupil groupings within
classes (including individual, small group, and whole class). In secondary schools, the debate
has tended to focus more on grouping strategies as a means of raising achievement. In 1997, the
Government White Paper Excellence in Schools stated that:

We do not believe that any single model of grouping pupils should be imposed on
secondary schools, but unless a school can demonstrate that it is getting better than
expected results through a different approach, we do make the presumption that setting
should be the norm in secondary schools.

(DfEE, 1997, p.38).

Subsequent policy documents have implicitly adopted a more flexible position on pupil grouping
and both the KS3 Strategy and Primary National Strategy provide many examples of different
types of grouping for different purposes, in particular illustrating the use of within-class
grouping. For example, in the KS3 Strategy Continuing Professional Development (CPD)

⁵ The term ‘setting’ is also referred to as ‘tracking’ in North America.
materials Handout 3.5 (DfES, 2003, p.85), there is reference to European research on small-scale classroom experiments which include different pupil groupings.

The Primary Strategy materials for CPD on Assessment for Learning suggest:

*Instigating supported review in which pairs or small groups of children, with or without the teacher, determine what they know and can do, what they still find challenging and the next steps for them.*

(DfES, 2004, p.74)

More recently, the DfES White Paper expressed support for pupil grouping:

*Grouping students can help build motivation, social skills and independence; and most importantly can raise standards because pupils are better engaged in their own learning.*

(DfES, 2005, p.58)

Support has been explicitly tied to the organisational use of grouping by ability as well as to small group initiatives being related to the personalised learning needs of pupils within schools and classes. A review of the research evidence concerning the impact of pupil grouping practices (Kutnick et al., 2005b) concluded that no one form of organisational grouping benefits all pupils. Variation in the research evidence may be explained by the different social and cognitive theories that underlie grouping recommendations (Kutnick, 2003)\(^6\) as well as size, composition and learning tasks assigned to pupil groupings (Kutnick, Blatchford and Baines, 2002; Blatchford, Kutnick, Baines & Galton., 2003). Consideration of within-class group size, composition and learning task\(^7\) have been considered more extensively in discussions of ‘social pedagogy’, and identify that the context within which classroom learning takes place may promote or inhibit the learning process. Hence, pupils assigned an individual practice task may be inhibited if asked to undertake the task while seated in a small group, or discussion-based new knowledge tasks will be facilitated if pupils are asked to work in pairs and have a supportive relationship with their learning partner. Further consideration and definition of social pedagogic issues related to within-class grouping of pupils is presented in the explanation of classroom ‘mapping’ found in Chapter 2 of this report.

Overall, attempts to narrow the achievement gap organisationally through setting or mixed ability grouping appear to have had little effect on the achievement spectrum that they were designed to reduce. In contrast, within-class ability grouping may have greater potential to raise standards through personalising the learning experience (Kutnick et al., 2005b); although the wide variations in the ways within class groupings are used makes this difficult to demonstrate. Further, previous research has not included evidence from studies involving pupils who have received training in group work skills (which we were able to provide in the literature review; and Blatchford, Galton, Kutnick and Baines, 2005). It should also be acknowledged that pupils may need to be grouped flexibly in relation to varying pedagogic and social pedagogic needs (Kutnick, 1994).

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\(^6\) For a fuller discussion of theories that underlie grouping and group work in schools, see Appendix 3 of Kutnick et al. (2005b). These theories explain sociological and psychological issues that are raised by particular organisational and within-class grouping of pupils as well as principles adopted in the practical use of particular types of grouping.

\(^7\) Learning tasks, which include new knowledge, extension/application, practice and revision are explained in Chapter 2, section 2.3.2 (footnote 10).
Recent research (Wiliam and Bartholomew, 2004; Hallam and Ireson 2003; Ireson, Hallam and Hurley 2005; Boaler, Wiliam and Brown, 2000) highlighted the significance and impact of pupil grouping according to ability and evaluated alternative models available for the organisation of groups within schools. Findings from such research indicated that while it is possible to identify varying effects of grouping on different pupils (notably the effects of grouping on pupils deemed to be of a high or low ability), the pedagogical character of classrooms is likely to act as a significant mitigating factor in terms of pupils’ capacity to learn effectively and their perception of themselves as learners. These studies show that grouping effects, especially on attainment and attitudes, are sensitive to types of group, teacher attitude and practice, resources for group working, pupil attitude, pupil group work skills, training for group working, and teacher support for group working. These effects strongly relate to the successful use of pupil groups as an inclusive (as opposed to exclusive or differentiating) classroom construction, a finding also noted in Galton, Gray and Rudduck (2003). In the context of such evidence, the current research begins with the position that organisational practices of pupil grouping are unlikely to have a linear, causal effect on the attainment or progress of pupils and pupils’ attitudes towards learning.

This contextual information leads to the conclusion that there is little consistency evident in the literature or practice concerning preferred organisational grouping of pupils (that is, the basis for organising classes within schools and subjects that either differentiates pupils through setting or integrates pupils through mixed-ability). While organisational grouping studies provide information on school- and department-based strategies used to meet the variation in pupil ability, the studies offer little insight into within-class teaching and learning processes and how these processes are affected by pupil attainment. At the most basic within-class level, it was noted that all pupils are placed in groups in one form/size or another, and various types of these pupil groups have been found to either promote or inhibit pupil learning (Blatchford et al., 2005).

1.2 The Research Questions (Aims and Objectives of the Study)
This project aimed to investigate the nature and impact of different grouping strategies and practices on the quality of teaching and learning in schools. The DfES identified a number of questions to be addressed:

- Which types of pupil grouping positively impact on the attainment of pupils?
- Which types of pupil grouping are best suited to particular groups of pupils (e.g. categorised by ability, gender, ethnicity etc.)?
- Are there examples of timetabling and classroom organisation to accompany a particular type of pupil grouping, in particular to meet the pupils who are working below or well above the national average?
- Which subjects are best suited to a particular type of grouping?

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8 Terms such as inclusive and exclusive refer to social processes within groups of pupils. Inclusive is associated with the integration of children with a range of abilities, ethnicities, etc and the planning of classroom tasks and training to support their working together; this is often developed within co-operative and collaborative approaches to learning. Exclusive and differentiated grouping separates pupils by identified criteria, such as attainment or gender. While exclusive grouping may allow focused tasks for each unique group, it is also associated with pupils perceiving themselves as different from those in other groups and the inability to work with other groups.
• Are there teaching and learning strategies that are best suited to particular types of pupil grouping?
• What is the impact on learning of the use of grouping within subjects?
• How is pupil grouping employed to improve transfer and transition between schools and Key Stages, particularly primary to secondary?

These research questions were addressed through two strands of research work:

1. An extended review of the literature that included an analysis and synthesis of current literature, and which aimed to identify types of pupil grouping suited to particular groups of pupils, the range of organisational policies regarding pupil grouping within schools that are related to different levels of performance, and the subjects best suited to particular types of grouping (Kutnick et al., 2005b); and

2. Integrated comparative case studies that drew upon issues highlighted in the extended literature review and that would provide an understanding of how grouping/organisational policy was implemented in classrooms and how this affected teaching and learning strategies, social pedagogy and learning, and planning for transition. The selection of schools to be included in the case studies was based on a range of innovative practices (described in section 1.4.1) as well as including a number of comparative primary and secondary schools.

The research questions were linked to a number of themes that were agreed to be the basis for the case studies (see Chapter 2 for fuller detail, and Appendices A though E). These themes included:
• purposes of organisational and within-class grouping of pupils;
• grouping to promote inclusion and diversity among pupils;
• pedagogic strategies that may relate to particular types of within-class pupil grouping;
• learning tasks that may be assigned to particular within-class pupil groups;
• organisational and within-class grouping that may be related to particular curriculum subjects;
• the role and relationship of pupil grouping with regard to transfer from primary to secondary school; and
• whether teachers or pupils have been trained to participate more effectively in within-class grouping.

These themes broadened and applied the research questions sufficiently for them to be addressed by a range of different stakeholders (pupils, head teachers, teachers, transition managers) whilst maintaining a clear link with the original six research questions listed above. Table 2a (in Section 2.7) relates the initial DfES research questions to the themes pursued in the case studies.
1.3 Phase I: The Extended Literature Review

It is useful to reflect upon the key findings and recommendations of this first phase of the research project, as many of the issues raised by the literature review were directly related to the findings of the second phase (case studies).

The literature review examined the current practice of pupil grouping across primary and secondary schools. Previous reviews on pupil grouping strategies and practice (Harlen and Malcolm, 1997; Sukhnandan and Lee, 1998; Kutnick, Blatchford and Baines, 2004) were extended and updated to provide a comprehensive overview of current evidence. Previous reviews of pupil grouping strategies and practices in schools revealed that there were two key areas of current research: (i) organisational practices that related primarily to attainment, such as setting, banding, streaming or mixed-ability, and (ii) the ways in which pupils interact and work with one another within classrooms that influence learning and pedagogy. These two areas of research have produced two quite distinctive sets of studies and different (although not necessarily conflicting) sets of results.

Studies of organisational practice have tended to reflect the policy of a school or department, and have correlated attainment and motivational outcomes with policy (for example, see Hallam and Ireson, 2003; Ireson et al., 2005). It should also be noted that there are a few (predominantly qualitative) studies that provide insights about why different organisational practices may be associated with different attainment and motivational outcomes (for example, see Wiliam and Bartholomew, 2004; Boaler et al., 2000).

Studies of within classroom grouping studies, on the other hand, provide a greater focus on the grouping characteristics that exist within both set and mixed-ability classes, and relate these groupings to the pedagogic practices and approaches to the learning observed. These within-classroom studies draw upon both quantitative and qualitative methods (for example, see Galton, Hargreaves, Comber, Wall and Pell, 1999; Kutnick et al., 2004; Kutnick et al., 2002).

The extended literature review considered both of the key areas of pupil grouping, and examined their interrelation. The review also supplemented the existing literature with: (i) recently completed and ongoing studies of within classroom grouping of pupils, and (ii) studies of pupil grouping strategies and their role and relationship to transfer policy and practice between primary and secondary schools. The key findings of the extended literature review are reproduced here:

1.3.1 Key findings from the Extended Literature Review

(a) Pupil grouping decisions are more complex than the current literature suggests.

Pupil grouping is often presented as a debate between setting and mixed-ability teaching. The research evidence suggests that schools show a much wider range of grouping practices that vary with age of pupils (especially at transition into secondary schools) and curricular area. In addition, consideration of pupil grouping should include a variety of organisational and within-class grouping for both social and academic purposes. In order to explain evidence of associations between grouping, learning and social behaviour, the review suggested that school, department and classroom decisions regarding pupil grouping are more complex than a
reflection of school/department policy regarding pupil ability and ‘seating’ arrangements. It should also be noted that within most of the existing literature on this subject there has been little attempt to disaggregate variables that ‘confound’ attainment such as social class, teacher perception (of attainment), school type, etc.

(b) There is no ‘one size fits all’ grouping strategy.
Both intervention and naturalistic studies concerning the impact of organisational pupil grouping practices have suggested that no one form of organisational grouping benefits all pupils. In ability-based grouping, there is evidence that pupils in lower attainment groups are vulnerable to making less progress, becoming de-motivated and developing anti-school attitudes. There is evidence that these pupils experience poorer quality of teaching and a limited range of curricular and assessment opportunities likely to have an impact on later life chances.

(c) The central role of friendship in within-class groupings, especially during transition, is challenged by the literature.
A number of studies/reviews have held that pupils working with friends in classrooms provided a route to draw social pedagogic factors together into a grouping strategy, as friendships can provide a non-threatening learning environment that is particularly supportive at times of transition (Maxwell, 1990; Hartup, 1993; Azmitia and Montgomery, 1993; Hartup, 1998). However, the view that friendship should be central to within-class group composition, especially during school transition, is challenged by the literature – there are contrasting studies that show friendship as promoting and inhibiting pupil learning and that friendship may ‘legitimise’ or reinforce cultural stereotypes of gender and ability within the classroom (Kutnick and Kington, 2005). Friendship studies have identified the vital role of affirmative relationships between pupils as being essential for learning, and this opens up a more general consideration of the role of pupil groupings found within all classrooms. Within-class grouping may have great potential to raise standards through personalising the learning experience for pupils, especially enhancing the benefits of heterogeneous organisational grouping effects. The size of classes, size of within-class groups, composition of within-class groups, nature of the assigned learning task, intended social interaction used in task completion and teacher intervention, appear to be related. Evidence suggests that planning for effective learning needs to take into account the social pedagogic relationship between these within-class factors, especially between group size, composition and the type of learning task assigned.

(d) There is no clear evidence from the literature that one form of grouping strategy is most effective in promoting academic or social transition from primary to secondary school.
Issues relating to pupil grouping may enhance or inhibit effective transfer from primary to secondary schools. The timing of information from tests influences organisational grouping practices and potentially increases the use of additional internal tests in Year 7. There is no clear evidence suggesting that information from testing (relating to organisational grouping in Year 7) or information regarding friendship (relating to social grouping of pupils in Year 7) is more effective in promoting either desired academic or social outcomes.
(e) **There is no consistent evidence in the literature whether certain grouping strategies adopted for particular pupils have a wider impact on the attainment of other pupils.**

The evidence is patchy concerning the impact of grouping strategies on pupils with specific characteristics. For pupils identified as gifted and talented, full-time specialist programmes and constructing separate groups within a mixed class taught by someone specifically trained have been shown to be effective in academic gains for these pupils, but the effects on the other pupils in the class and school remain unknown. Key finding (b) also noted potential negative effects of grouping low ability pupils together: aside from low motivation and poor behaviour, low ability pupils working together are unlikely to share a range of knowledge and understanding that would enhance discussion and communication for learning within a group.

(f) **Boys, some ethnic minority groups and some pupils with special educational needs (SEN) tend to be over-represented in the lower set subject groups.**

Evidence from co-educational schools that organise their pupils into attainment sets suggests that boys are over-represented in lower sets. Additionally, there is a high proportion of ethnic minority pupils and children with a range of special educational needs found in low sets. Studies describing the nature of classroom activity for low sets have often found that these pupils are given a restricted curriculum and are often taught by inexperienced teachers or teaching support workers. Pupils in these low sets have been described as ‘de-motivated’. There is some research evidence for the potential benefits of flexible organisational grouping and within-class grouping that allows for the effective deployment of teaching assistants for pupils with SEN, although consideration should be given as to whether this assistance will be more effective when provided by a teaching assistant or classroom teacher.

(g) **There is little in the existing literature that describes the effects of different pupil grouping strategies on academic attainment in different subjects.**

There is very limited research on the differential effects in different subjects of either organisational or within-class grouping. However, one study showed that the stronger effects of setting in mathematics, which limits the progress of lower attaining pupils while enhancing that of higher attainers, were not apparent in English or science.

Recent studies of within-class grouping have sought to address the quality of social pedagogy by planning and undertaking theoretically informed interventions over time (Blatchford et al., 2003; Gillies and Ashman, 2003; Blatchford et al., 2005). These interventions involve the teaching of group work skills to pupils and supporting teachers’ understanding and use of group work, and have been associated with increased pupil attainment and changes in attitudes of pupils and teachers. Effective interventions may need to vary according to age of pupil and curricular area.

1.3.2 **Key Recommendations from the Extended Literature Review include:**

- Ensuring that policy and guidance on practice that relates to grouping acknowledges: the wide range of practices that exist; the need for organisational grouping to be flexible and evaluated; and the need for teachers and schools to be responsive to emerging effects.

- Encouraging more explicit planning and evaluation of within-class grouping, taking account of possible relationships between pupil characteristics, group size, group composition, task and social interaction.
• Emphasising the importance of teaching and supporting group work skills for pupils and teachers and of the potential role of teaching assistants in this process.

• Exploring through further research how knowledge and practices of both organisational and within-class grouping may be drawn upon to facilitate transfer from primary to secondary schools, in particular to acknowledge the potential impact of friendship, gender and focus on pedagogy.

Other future priorities for research identified included:

• Comparing the effects of organisational grouping in different subjects.

• Comparing the effects of organisational and within-class grouping on pupils from minority ethnic groups; those identified with SEN or as gifted and talented.

• More research looking at the longer term effects of ‘training’ pupils and school staff in group work strategies.

1.4 Phase II: Comparative Case Studies and Classroom Mapping

The aim of carrying out comparative case studies was to investigate the effects of different forms of grouping on pupil learning and achievement in KS2 and 3 at school, department and classroom levels. As well as examining the broad relationship between grouping, achievement and progress, a number of key research questions and themes were addressed in this second phase of the work (see section 1.2). In order to provide insights at classroom level within the context of school and departmental strategies (including the nature of classroom organisation, teaching and learning strategies, and pupil and teacher perspectives on grouping and group work), 24 schools (12 primary schools and 12 secondary schools) were used in the case studies.

Table 1a displays the mappings and observations that were undertaken across a range of subjects (but mainly in core curriculum subjects) within Years 6, 7, 8⁹ and 9. Analyses of the proportion of streamed, set and mixed ability classes that characterise each case school are found in Chapters 3 and 4, Tables 3a and 4a.

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⁹ It should be noted that Year 8 classes were observed in only one case study school. In this school the Year 8 classes were formed into nurture groups which were designed to support the KS2 – KS3 transition.
### Table 1a: A Summary of the Case Visits Undertaken

<table>
<thead>
<tr>
<th>School</th>
<th>Innovative Practice or Role</th>
<th>Year6</th>
<th>Year7</th>
<th>Year9</th>
<th>Subject Areas¹ (sessions observed in brackets)</th>
<th>Management</th>
<th>Teachers</th>
<th>Year 6 Pupils</th>
<th>Year 7 pupils</th>
<th>Year 9 Pupils</th>
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<tbody>
<tr>
<td>Area A</td>
<td>P1  Feeder for S1 – S3</td>
<td>9</td>
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<td></td>
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<td>2</td>
<td>8</td>
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<tr>
<td></td>
<td>P2  Feeder for S1 – S3</td>
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<td></td>
<td></td>
<td>N(2) L(3) S(1)</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>P3  Feeder for S1 – S3</td>
<td>9</td>
<td></td>
<td></td>
<td>L(3) DA(1) N(2) H(1) PE(1)</td>
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</tr>
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<td></td>
<td>S1  Extended Gifted &amp; Talented Programme</td>
<td></td>
<td></td>
<td></td>
<td>H(1) E(2) MFL(1) RE(1) M(1) ICT(1) S(1)</td>
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<tr>
<td></td>
<td>S2  Performing Arts College</td>
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<td>S3  2 Year KS3 Programme</td>
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<td>3</td>
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<table>
<thead>
<tr>
<th>School</th>
<th>Innovative Practice or Role</th>
<th>Year6</th>
<th>Year7</th>
<th>Year9</th>
<th>Subject Areas¹ (sessions observed in brackets)</th>
<th>Management</th>
<th>Teachers</th>
<th>Year 6 Pupils</th>
<th>Year 7 pupils</th>
<th>Year 9 Pupils</th>
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<td>Area B</td>
<td>P1  Urban comparison Comb. Year 5/6</td>
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<td></td>
<td>P2  SPRinG school</td>
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<td></td>
<td></td>
<td>L(1) H(2) DT(2) PSHE(1)</td>
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<td>S1  Urban Comparison</td>
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<td>4</td>
<td></td>
<td>7MFL(1) 7E(1) 7MU(2) 9M(1) 9E(1) 9S(1) 9MFL(1)</td>
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<td>4</td>
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<tr>
<td></td>
<td>S2  Pupil Voice &amp; Assessment for Learning</td>
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<td></td>
<td>7M(1) 7S(1) 7H(1) 9H(2)</td>
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¹ Subjects are referenced as follows: N=Numeracy, L=Literacy, H=Humanities, DT=Design Technology, ICT=Information & Communications Technology, S=Science, DR=Drama, A=Art, MU=Music, TG=Tutor Group, PSHE=Personal, Social and Health Education, CT=Circle Time, DA=Dance, MFL=Modern Foreign Languages. Where numbers prefix codes, these refer to the year group; for secondary schools, school year observed precedes subject. ²Not possible to interview during visit due to illness; ³Decision taken to focus on this group only (see text for details)
<table>
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<th>Area C</th>
<th>P1</th>
<th>Feeder for S3</th>
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<td>Feeder for S3</td>
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<td>Feeder for S2</td>
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<td>S1</td>
<td>Comparison</td>
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<td>E(3) M(2) A(1)</td>
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<td>S2</td>
<td>SPRinG school</td>
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<td>M(3) MU(2) PE(1) DT(1) DR(2)</td>
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<td></td>
<td>S3</td>
<td>Nurture Group for KS2 – KS3 transition</td>
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<td>SPRinG school</td>
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<td></td>
<td>P3</td>
<td>Running Secondary TT from Year5</td>
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<td>L(3) DT(2) PSHE(1)</td>
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<td></td>
<td>S1</td>
<td>Single-sex classes to Year9</td>
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<td>2</td>
<td>7E(2) 9E(2)</td>
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<td></td>
<td>S2</td>
<td>Girls set for Maths</td>
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<td>7E(1) 7M(1) 9M(1) 9S(2) 9E(1)</td>
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<td>S3</td>
<td>Elevated Middle Set in Year8</td>
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<td>TOTALS</td>
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<td>31</td>
<td></td>
<td>35</td>
<td>61</td>
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2 Not possible to interview during visit due to illness; 3 Decision taken to focus on this group only (see text for details)
1.4.1 Profiles of the Schools

Twenty-four schools were involved in the study, drawn in equal numbers from four geographical areas of England:

- North of England
- South East of England
- East of England
- Greater London

Area A: The North of England

Secondary School 1 (As1): Located eight miles south of the centre of a large northern conurbation, in an urban area with a large council estate, As1 is a medium–sized (total pupil number = 900+), mixed gender, 11–16 year-old, non–denominational school. The school has shown a fairly level performance at KS3 (in terms of value–added) over the last three years, which whilst being at the Local Authority (LA) average, is below the national average. As1 was invited to become part of this research study because it runs an extended ‘gifted and talented’ programme to develop pupil achievement at KS3 and KS4. This initiative is given a high priority in the school, and two cohorts of pupils have been identified as being very able. Some subjects provide a distinct curriculum for these pupils, whilst in others they form the top group. A number of enrichment activities also take place to support mathematics (mathematics challenges) and in English (visits to the school by poets). Many other extra–curricular activities are available to support the gifted and talented strands in the school.

Secondary School 2 (As2): Located in a largely urban area with large council estates four miles north of the centre of a large northern conurbation, As2 is a medium-to-large (total pupil number = 1300+), mixed gender, 11-16 year-old, non-denominational school. The school has shown a consistent improvement in performance at KS3 (in terms of value–added) over the last three years, and although currently slightly below the LA average, it lies on the national average. As2 was invited to take part in this research study as it has a policy of setting to raise achievement.

Secondary School 3 (As3): Located in an urban area with a mixed housing stock some four miles south of the centre of a large northern conurbation, As3 is a large (total pupil number = 1900+), mixed gender, 11–18 year-old, non-denominational school. The school has shown a fairly level performance at Key Stage 3 (in terms of value–added) over the last three years, peaking in 2002/2003. Currently it is at the LA average, but below the national average. As3 was invited to take part in this research study as it runs a two-year accelerated KS3 programme. This programme is part of a national strategy designed to increase the pace of learning, raise standards, enhance pupils’ motivation and engagement, and improve transfer between KS2 and KS3.

Primary School 1 (Ap1): Located eight miles south of the centre of a large northern conurbation, in an urban area with a large council estate, Ap1 is a medium–sized (total pupil number = 400+), mixed gender, 3–11 year-old, non–denominational school. The school has shown an uneven performance at KS2 (in terms of value–added) over the last three years, dipping in 2004, and currently being slightly below the LA and national average. Ap1 was invited to take part in this research study, as it is a feeder primary for As1 and As3.
Primary School 2 (Ap2): Located four miles north of the centre of a large northern conurbation, in an urban area with a large council estate, Ap2 is a medium–sized (total pupil number = ~400) mixed gender, 5–11 year-old, non–denominational school. The school has shown a more or less level performance at KS2 (in terms of value–added) over the last three years, and currently is slightly below the LA and national average. Ap2 was invited to take part in this research study, as it is a feeder primary for As2.

Primary School 3 (Ap3): Located in an urban area with a mixed housing stock some four miles south of the centre of a large northern conurbation, Ap3 is a medium–sized (total pupil number = ~430) mixed gender, 3–11 year-old, non–denominational school. The school has shown a more or less level performance at KS2 (in terms of value–added) over the last three years, and currently is slightly above both the LA and national average. Ap3 was invited to take part in this research study, as it is a feeder primary for As1 and As3.

Area B: The South East of England

Secondary School 1 (Bs1): Located a few miles to the east of a medium–sized south coast conurbation, in an urban area of mixed housing, Bs1 is a large (total pupil number = 1700+), mixed gender, 11–18 year-old, non–denominational school. The school has shown a fairly level performance at KS3 (in terms of value–added) over the last three years, which is below both the LA and the national average. Bs1 was invited to take part in this research study as an urban comparison school.

Secondary School 2 (Bs2): Located in an urban area with a mixed housing stock some three miles north east of the centre of a medium-sized south west coast conurbation, Bs2 is a medium - sized (total pupil number = ~1000), mixed gender, 11–16 year-old, non-denominational school. The school has shown has shown an improving performance at KS3 (in terms of value–added) over the last three years, and is currently well above both the LA average and the national average. Bs2 was invited to take part in this research study as it had developed a ‘pupil voice’ programme and is implementing Assessment for Learning (AfL). Assessment for learning involves using teacher assessment in the classroom to raise pupils’ achievement. It works on the principle that pupils will improve in terms of their learning, if they understand the aim of that learning, where they are in relation to this aim, and how they can achieve the aim. AfL is supported by the DfES, Ofsted and the Qualifications and Curriculum Authority (QCA).

Secondary School 3 (Bs3): Located in a large village ten miles north of a medium-sized south coast town, Bs3 is a medium-sized (total pupil number = 900+), mixed gender, 11–16 year-old, non-denominational school. The school has shown a consistently falling performance at KS3 (in terms of value–added) over the last three years, and currently it is slightly below both the LA and the national average. Bs3 was invited to take part in this research study as suburban comparison school.

Primary School 1 (Bp1): Located two miles west of the centre of a large coastal conurbation, in an urban area with a large council estate, Bp1 is a medium–sized (total pupil number = 300+), mixed gender, 3–11 year-old, non-denominational school. The school has shown a decreasing performance at KS2 (in terms of value–added) over the last three years, and is currently well
below the LA and national average. Bp1 was invited to take part in this research study as an inner city comparison primary.

**Primary School 2 (Bp2):** Located four miles east of the centre of a large coastal conurbation, in an urban area with a large council estate, Bp2 is a medium–sized (total pupil number = ~400) mixed gender, 5-11 year-old, non–denominational school. The school has shown a more or less level performance at KS2 (in terms of value–added) over the last three years, and currently is slightly below the LA and national average. Bp2 was invited to take part in this research study as it is a school that was involved (previously) in the ESRC Teaching and Learning Research Programme (TLRP) Phase II Social Pedagogic Research into Group Work (SPRinG) project. This project worked with a number of schools to develop group working skills and programmes at KS1 and 2 (See Kutnick et al., 2005 for review).

**Primary School 3 (Bp3):** Located in an urban area with a mixed housing stock near to the centre of a large coastal conurbation, Bp3 is a medium–sized (total pupil number = 330+) mixed gender, 4–11 year-old, non–denominational school. The school has shown an improved performance at KS2 (in terms of value–added) over the last three years, and currently is above both the LA and national average. Bp3 was invited to take part in this research study as an urban comparison primary.

**Area C: East of England**

**Secondary School 1 (Cs1):** Located five miles north east of the centre of a eastern city, near to a small town with a mixed stock of housing, Cs1 is a large–sized (total pupil number = 1500+), mixed gender, 11–18 year-old, non–denominational school. The school has shown an improving performance at KS3 (in terms of value–added) over the last three years, and currently is above both the LA and national average. Cs1 was invited to take part in this research study as a comparison school.

**Secondary School 2 (Cs2):** Located on the eastern outskirts of a medium-sized eastern city, in a town with a mixed housing stock and being relatively affluent, Cs2 is a large–sized (total pupil number = 1600+), mixed gender, 11–18 year-old, non–denominational school. The school has shown a level performance at KS3 (in terms of value–added) over the last three years, and currently is at the LA and national average. Cs2 was invited to take part in this research study as it is a school that was involved (previously) in the ESRC Teaching and Learning Research Programme (TLRP) Phase II Social Pedagogic Research into Group Work (SPRinG) project. This project worked with a number of secondary schools to develop group working skills and programmes (see Kutnick et al., 2005 for review).

**Secondary School 3 (Cs3):** Located on the eastern outskirts of the centre of a medium-sized eastern city, in an economically deprived area with large housing estates, Cs3 is a medium–sized (total pupil number = 900+), mixed gender, 11–16 year-old, non–denominational school. The school has shown an uneven performance at KS3 (in terms of value–added) over the last three years, and currently is well below the LA and national average. Cs3 was invited to take part in the research study as it has a special nurture group for supporting the transition from KS2 to KS3. This initiative supports primary school children moving to this secondary school in terms of settling in and providing targeted support.
Primary School 1 (Cp1): Located a few miles south east of the centre of a medium-sized eastern city, in an economically deprived area with large housing estates, Cp1 is a medium-sized (total pupil number = ~360), mixed gender, 3–11 year-old, non-denominational school. The school has shown a falling performance at KS2 (in terms of value-added) over the last three years, although the latest figures (2005) indicate an improvement. Currently Cp1 is below the LA and national average. Cp1 was invited to take part in this research study as it is a feeder primary for Cs3.

Primary School 2: (Cp2): Located a few miles from the centre of a medium-sized eastern city, in an economically deprived area with mixed housing and some new developments, Cp2 is a medium-sized (total pupil number = ~350), mixed gender, 3–11 year-old, non-denominational school. The school has shown a mixed performance at KS2 (in terms of value-added) over the last three years, dipping in 2004, and currently is just below the LA and national average. Cp2 was invited to take part in this research study as it is a feeder primary for Cs3.

Primary School 3: (Cp3): Located at the northern edge of a medium-sized eastern city, in an urban area with mixed housing, Cp3 is a medium-sized (total pupil number = ~350), mixed gender, 3–11 year-old, non-denominational school. The school has shown a mixed performance at KS2 (in terms of value-added) over the last three years, peaking in 2004, and currently is just below the LA and national average. Cp3 was invited to take part in this research study as it acts as a feeder school for Cs2.

Area D: Greater London

Secondary School (Ds1): Located north east of London, in an urban (town) area with mixed housing, Ds1 is a large-sized (total pupil number = 1500+), mixed gender, 11–18 year-old, non-denominational school. The school has shown a good performance at KS3 (in terms of value-added) over the last three years, and currently is well above the LA and national average. School Ds1 was invited to be part of the research project as it has separate single-sex classes up until Year 9. The Head Teacher and Governors support the teaching of boys and girls in separate classes to Year 9, recognising that the approach of boys to academic work is very different to that of girls. They feel that separate teaching gives the girls confidence in lessons which they carry through to KS4.

Secondary School 2 (Ds2): Located near to the centre of London, in an economically deprived urban area with large council estates, Ds2 is a medium-to-large-sized (total pupil number = 1300+). Girls, non-denominational, 11–16 year-old school. The school has shown a good performance at KS3 (in terms of value-added) over the last three years, and currently is above both the LA and national average. School Ds2 was invited to become part of the research study as it sets girls for mathematics.

Secondary School (Ds3): Located in a borough of London, in an economically deprived urban area with large council estates, Ds3 is a medium-to-large-sized (total pupil number = 1400+), mixed gender, 11–16 year-old, non-denominational school. The school has shown a level performance at KS3 (in terms of value-added) over the last three years, and currently is below the LA and national average. School Ds3 was invited to become part of the research study as it
has an innovative policy of running an elevated middle set Year 8. The school introduced an innovation specifically designed to boost level 3 learners to level 5 by Year 9. This involved 3 hours a week where they would work outside the classroom, undertake research, and be encouraged to write for real audiences and from personal experience. These 3 hours replace languages in their timetable.

**Primary School (Dp1):** Located a few miles north of the centre of London, in an economically deprived urban area with high rise housing and a large ethnically–diverse population, Dp1 is a large–sized (total pupil number = 718), mixed gender, 3–11 year-old, non–denominational school. The school has shown a mixed performance at KS2 (in terms of value–added) over the last three years, dipping slightly in 2004, and currently is around the LA and national average. Dp1 was invited to take part in this study as an urban comparison school.

**Primary School (Dp2):** Located east of the centre of London in an economically deprived urban area with large amounts of housing, Dp2 is a medium–sized (total pupil number = ~ 420), mixed gender, 4–11 year-old, non–denominational school. The school has shown a good performance at KS2 (in terms of value–added) over the last three years, and currently is just below the LA and at the national average. Dp2 was invited to take part in this study as it was formerly involved in the ESRC/TLRP Phase II SPRinG research project on Pupil Grouping.

**Primary School (Dp3):** Located a few miles east of the centre of London, in an economically deprived area with largely social housing and a diverse ethnic population, Dp3 is a small–sized (total pupil number = 190), mixed gender, 4–11 year-old, non–denominational school. The school has shown a good performance at KS2 (in terms of value–added) over the last three years, peaking in 2004, and currently is above the LA and national average. Dp3 was invited to take part in this research study as it runs a secondary–style timetable from Year 5 whereby the subject areas are more clearly defined as separate sessions through any particular day.
Chapter 2: The Methodological and Analytical Framework

2.1 Case Study Design
The Extended Literature Review, undertaken as a part of this project, identified a number of issues concerning effects of diverse grouping strategies on pupils, their teachers, departments and schools. Case studies were used to provide insights regarding pupil grouping at classroom, department and school levels (including classroom organisation, teaching and learning strategies, pupil and teacher perspectives). The case studies drew upon an observational instrument (see classroom mapping section 2.3, below) and also upon one-to-one and group interviews (see interviews section 2.4, below) with pupils and teachers to provide further insights to group working issues. It was anticipated that case studies would allow insights to be gained with regard to pupil grouping strategies and practices in individual classroom/school cases as well as developing measures of frequency of use across all the classrooms/schools observed. Twenty-four case schools were involved, and observations were made in multiple classrooms per school (see table 1a). In addition, interviews were arranged in each school with the teacher/manager responsible for the planning and implementation of primary to secondary school transition. Case study data also allowed the description and analysis of the effects of different methods of pupil grouping (both organisational and within-class) in the context of school factors, as well as the study of particular classrooms that have engaged in extensive training for group working (for example the ESRC/TLRP Phase II SPRinG project).

The research design model adopted was an embedded, multi–site case study approach (Yin, 1994; Keen and Packwood, 1995). This approach has the capability of addressing the research questions and themes in the complex contexts of the case study schools. Yin describes a sequential, two-stage process termed generalisation, but perhaps what is more properly termed approximation, where: (i). individual cases are considered against an analytical framework to draw out themes, then (ii). these themes are developed by applying them to other cases in the sample. In doing so, the narrative that underpins the exploration and explanation of themes drawn from one case suggests propositions that may be mapped and tested on another related (by the initial sampling strategy) case.

2.2 Sampling Strategy
The sample of classrooms and schools included in the comparative case studies was selected in order to provide some insights into the issues that arose from the Extended Literature Review and DFES research questions. This strategy also allowed the research team to document and explore further unique and innovative practices (especially with regard to training for group work, and adaptations within secondary schools developed to overcome problems of transition). The research reported here drew upon the experience of key members of the research team to purposively select case schools and classrooms. Members of the research team have been studying various forms of pupil grouping over many years (from Galton, Simon and Croll, 1980 to Kutnick et al., 2005a) and this experience allowed the sample and research design to account for a number of concerns beyond the immediate research questions cited in Chapter 1. Some of these concerns included: (i) grouping as a seating versus a working strategy in classrooms (identified by Galton et al., 1980), and re-investigated in the 1999 ‘revisited’ study Galton et al.,

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10 In this and similar investigations, large-scale observations of junior school classrooms found that children were seated in small groups in more than 80% of their time while they were assigned collaborative (group) work in 15%
within-class grouping of pupils may include a range of group size, including individual pupils, small (4 to 6 pupils) and large (8 to 15 pupils) groups and whole class. Blatchford and Kutnick developed mapping techniques to identify how these various groupings in primary and secondary schools related to pedagogy, interaction and social pedagogy (Kutnick et al., 2002; Blatchford, Kutnick and Baines, 1999). Also, Blatchford et al. (2005) explored how the relational training of pupils for work in groups within classrooms promoted social inclusion within classrooms (among boys and girls, the range of pupil attainment, and integration of pupils with special educational needs (SEN)). These studies provided reliable and comparative instruments to document types of group working taking place in secondary and primary school classrooms that were used in classrooms and topics for interview with teachers and pupils. The experience of researchers undertaking these comparative case studies allowed choice of case schools at primary and secondary levels – providing a range of practice with regard to pupil grouping. It should be noted that this purposive and experience-based sampling was selected to provide a qualitative range of grouping strategies rather than a basis for statistically based comparisons.

The sample included the following characteristics:

1. The schools and classes represented a range of teaching and learning practices at KS2 and 3 that may be found across schools in England (in terms of setting and mixed ability grouping of various subjects and with regard to various age levels), and allowed a focus on other characteristics (as described below).

2. The schools and classes included differences in both organisational (by attainment) and within class groupings.

3. Schools and classes that undertook a range of innovative practices with regard to the grouping of pupils were included in the sample (these innovative practices included training pupil for more effective group working skills, involvement with Assessment for Learning programmes, separation of male and female pupils for specific lessons in co-educational schools, and other practices described in Chapter 1 and Tables 1b, 3a and 4a).

4. The sample covered four geographic regions in England included urban, suburban and rural schools.

5. Where possible, a number of the primary schools selected for inclusion in the sample were ‘feeder schools’ for secondary schools in the sample, thus allowing researchers to ascertain whether ‘connections’ took place between the schools with regard to continuity of grouping practices.

Whilst the general aim was to structure the sample to be generally representative in terms of socio-economic indicators of pupil intake, range of prior attainment, ethnic/SEN diversity etc., a number of schools involved in different policy initiatives (e.g. Specialist Schools or Leading Edge schools, SPRinG, etc.) were also included. The choice of schools was also informed by measures of relative performance drawn from publicly available value-added performance data (Ofsted and Pupil Level Annual School Census (PLASC).
2.2.1 The Choice of Particular Classes within Schools

The selection strategy for identifying classrooms to observe and map differed for primary and secondary schools.

a. In the primary schools sample, Year 6 classes were selected as cases (although one school combined Years 5 and 6). This selection allowed a focus on transition issues from the perspective of primary to secondary school. Observations took place after KS2 testing (May, 2005). Depending on size of the year cohort, at least two classes were observed per school (see Table 1a). For each class, every curriculum subject introduced to the class was mapped during each half-day observation; thus, the number of curriculum subjects observed varied from school to school, dependent on extended and other teaching sessions. The selection criteria were based upon the organisational grouping practices of the schools. If Year 6 was organised as a mixed ability class, then normally two classes were randomly selected. If Year 6 was set or banded by attainment, then classes were observed across the range of attainment. Interviews with ‘transition coordinators’ within each school provided additional information concerning grouping policies between primary and secondary schools (based on curriculum, friendship and other criteria), and whether transition planning accounted for these policies.

b. Within each secondary school, classrooms were selected on the basis of ‘pupil participation’ for Year 7 and Year 9 rather than pre-specifying curriculum areas for inclusion. In discussion with Heads of Years 7 and 9, two pupils were randomly selected in each Year, these children being representative of high and low (school-based) attainment. These children were ‘shadowed’ in their timetabled classes for a half-day by a researcher. Information (in the form of observational notes and classroom maps) was obtained on the range of curriculum subjects attended by the child, as well as understanding of the range and continuity of groupings that were structured for pupils during their days in school. It was expected that within a half-day, each pupil would be likely to attend two to three classes, hence 8 to 12 observations were made per school. In the event, a range of factors (changes to timetable, staff absences, focusing on a specific innovative practice in one particular Year group etc.), meant that the number of classes observed varied from school to school in the sample. The total number of classes attended and subjects observed per school is reported in Table 1a.

In addition, a strong contextual picture of the case schools was developed from discussions with staff and pupils, and from the various Ofsted reports that were available to the research team. This contextual picture included data on attainment and progress (both on a whole school and subject specific basis), socio-economic factors associated with the school catchment area, the percentage of pupils with special educational needs, school policy on pupil grouping, and whole school approaches to other pedagogical practices likely to interact with the effects of pupil grouping.
2.3 Classroom Observations and Mapping

2.3.1 Sampling
School selection was not undertaken to give a representative sample across the country, but to provide a range of schools that undertook innovatory or non-innovatory practices with regard to the grouping of pupils within KS2 and 3. The overarching rationale behind school visits and classroom/subjects observed was to:

- examine practice in relation to the organisational grouping of pupils in a subject-by-subject, or curricular basis;
- map practices of within-class grouping on a teacher-by-teacher basis to establish the within–class groups likely to promote or inhibit learning in relation to the teacher’s pedagogic approach;
- interview teachers in order to examine beliefs and experiences about the effects of different forms of pupil grouping; and
- interview pupils in order to examine beliefs and experiences about the effects of different forms of pupil grouping.

Primary and secondary school classrooms (within the twenty-four case study schools) were selected for mapping on the basis of ‘pupil shadowing’ for Years 6, 7 and 9 (and in one case school, Year 8 where particular innovations were being undertaken) rather than pre-specifying curriculum areas for inclusion. The two children in each Year that were ‘shadowed’ (see 2.2.1 for an explanation of the choice of these children) in their timetabled classes for a half-day provided information on core and non-core curriculum subjects as well as the range and continuity of groupings that were structured for pupils during their days in school. This method of selection meant that researchers and mappings were dependent on the structure and timetabling of the individual schools. In the current analysis, main curriculum areas observed were core areas of English, mathematics, science and humanities, with physical education (PE), music, modern foreign languages (MFL), drama, information and communications technology (ICT) and design technology (DT) represented as well.

2.3.2 Mapping
Within the context of a particular lesson, this method enabled researchers to map composition of pupil groups (by attainment, sex, friendship, etc.), the type of learning task assigned (cognitive, extension, practice\textsuperscript{11}), action and interaction related to the learning task (individuated, individualised\textsuperscript{12}, paired, small or large group), and teacher involvement with the working group. Classroom mapping was originally developed to capture classroom-level information concerning social pedagogy by Blatchford et al., (1999). Mapping was designed to provide an insightful and intensive observational approach and provide comparable information from primary and secondary schools.

\textsuperscript{11} The terms and definitions for these learning tasks are slightly modified from original research by Norman (1978). Cognitive refers to incremental (introducing new ideas, procedures or skills) and restructuring (demanding invention or discovery of an idea) tasks. Extension refers to application or synthesis of familiar skills to a new problem. Practice refers to the tuning of new skills on familiar problems or the use of skills that have not been used for some time. This range of learning tasks should remind readers of the complexity of learning activities that may take place in classrooms. Further, as identified by Edwards (1994), any sequence of activities that leads to learning will include some ‘flow’ of new knowledge to extension of knowledge and practice/revision of that knowledge.

\textsuperscript{12} Individuated and individualised refer to learning activity assigned individual pupils; this may be the same activity assigned to all children in the group/class but only worked upon by the individual child (individuated), or separate assignments given to each child individually (individualised). While the pupil is not expected to interact with others in this type of activity, sitting children in small or large groups while assigning this activity often occurs in classrooms.
secondary school classrooms. The origin and piloting of the mapping method was undertaken by researchers and teachers; this collaboration recognised that simple description of classroom seating and activity had to be supplemented by teacher explanations of their lessons (and this explanation could take place in face-to-face interviews or through written descriptions). The co-development of the mapping instrument, and teacher confidence in its use, showed that this instrument had a high degree of reliability (Kutnick et al., 2005a).

The maps provided a range of descriptive data (both quantitative and qualitative) concerning the teachers’ role, learning tasks and patterns of interaction in particular types of classroom grouping, curriculum area and school. Given that the number of groupings and number of pupils found within each grouping may vary, the mappings analysis described in Chapters 3 and 4 were undertaken with a ‘weighted’ approach.

2.4 Interview Design
Classroom maps allowed the grouping phenomenon of each teacher’s classroom to be discussed in terms of its pedagogic purpose and whether the lesson that was mapped was characteristic of the teacher’s social pedagogic approach, providing a focused basis for interview. Interviews with teachers developed clearer understandings of how they made decisions about pupil grouping (within long, medium and short term planning, as well as in the classroom context) and what informed these decisions. Similarly, the classroom maps also allowed pupils to be interviewed, reflecting on their understanding and preference for particular types of classroom grouping.

2.4.1 Teacher interviews
Interviews with teachers drew on the ‘mapped’ and other school-based and classroom-based information and explored:

- their beliefs about the effectiveness of different practices of organisational and within-class pupil grouping;
- their rationale for the use of particular grouping practices within their own classroom;
- ways in which they tailored grouping practices to meet the needs of (i) particular subject areas, (ii) particular groups of students and (iii) different kinds of learning activity;
- ways in which their grouping practices were shaped by school senior managers, and whole school, departmental and national policy; and
- ways in which initial teacher training or continuing professional development informed their decisions to use particular grouping practices.

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13 Mapping is, essentially, a descriptive method that allows the identification of both number and types of classroom actions (Hammersley, 1990) while avoiding simplistic binary oppositions between variables (Millard, 1997; Denscombe, 1998). The method also overcomes a number of methodological critiques of classroom-based studies, especially combining case-based qualitative and means-based quantitative methods as discussed by Boaler (1997).

14 This approach was used to overcome simple mapping reports based on the total number of groups in any class. Weighting allowed analyses to be undertaken that accounted for the number of pupils within any group (that is, from a pupil’s perception), and did not allow data to be skewed by the fact that “very small groupings would have disproportionately higher frequency” (see Kutnick et al., 2002).
2.4.2 Pupil interviews
Within case study schools, pupil interviews explored:

- pupils’ preferences for different forms of grouping;
- the effects of types of grouping on pupils’ motivation;
- the effects of grouping on pupils’ satisfaction with their work;
- the extent to which pupils’ understanding mirrored that of their teachers;
- the extent to which pupils felt able to draw on the knowledge of others within lessons;
- whether pupils worked with teachers to develop group work; and
- the extent to which pupils were encouraged to evaluate and reflect on different ways of working together.

Pupil interviews were conducted with small focus groups including pupils identified by the teacher as representing a range of the attainment spread within subject areas or class groups. Focus groups were drawn upon for pupil interviews because of the time-related difficulties of arranging individual interviews. Focus groups were found to be useful, as pupils were able to share a range of ideas and issues. The focus groups provided a useful counterpoint to the views expressed by the teachers.

2.5 Statistical Approach to the Analysis of Classroom Maps
In the classrooms observed, data were collected and input at the ‘group’ level. In total, 3957 pupil groupings were observed in the 167 mapped classes (this may be broken down into 84 Year 6, 52 Year 7 classes, 2 Year 8 classes, and 29 Year 9 classes; also described in Tables 3a and 4a). Statistical analysis of the mapping was undertaken only at a descriptive level. The use of percentages and periodic comparative tables was the preferred analytic method due to the choice of purposive sampling approach.

2.6 A General Overview of Quantitative Information Collected on Schools.
In an effort to provide a general description of the case schools and their grouping strategies in relation to academic achievement, the following information was brought together in Tables 3a and 4a: KS2 and 3 results per school for core curriculum subjects drawn from DfES and school sources (mathematics, English and science); KS2 and 3 core curriculum results for the local authority (for each school) and nationally (for maintained schools); KS1 to 2 and KS2 to 3 value-added scores for school, local authority and nationally; proportion of grouping practice for classes within each school (mixed ability classes or set/streamed); and any innovatory practice evident in the school.

2.7 Design of an Analytical Framework for the Case Studies
The interrogative and analytical framework consisted of identifying major themes that could be attributed to the context, purposes, processes and effectiveness of pupil grouping strategies in schools. These themes were generated from past research and in the light of the six DfES generated research questions (see Table 2a), and the themes map onto questions in interview schedules with the different stakeholders (e.g. senior managers, teachers and pupils).
<table>
<thead>
<tr>
<th>Research Question</th>
<th>Theme</th>
<th>Source(s) of Evidence</th>
</tr>
</thead>
</table>
| Question (e): What is the impact learning of the use of grouping within subjects or classes? | A: PURPOSES   | See also Classroom Mapping Analysis in Chapters 3 and 4 of this report  
Appendix B: Section 1(Q2,Q3), Section 2(Q 5)  
Appendix C: Section 1(Q1 – 4), Section 2(Q1,Q2)  
Appendix E: Section 1(Q1), Section 2(Q1) |
| Question (a): Which types of grouping are best suited to particular groups of pupils? | B: INCLUSION* | See also Classroom Mapping Analysis in Chapters 3 and 4 of this report  
Appendix B: Section 2(Q3,Q4)  
Appendix C: Section 1(Q3), Section 2(Q2)  
Appendix D: Section 1(Q5)  
Appendix E: Section 1(Q2) |
| Question (d): Which teaching and learning strategies are best suited to particular types of grouping? | C: PEDAGOGY   | See also Classroom Mapping Analysis in Chapters 3 and 4 of this report  
Appendix B: Section 2(Q1 – 3)  
Appendix C: Section 2(Q2 – 6)  
Appendix E: Section 2(Q2) |
| (Additional Thematic Focus)                                                       | D: LEARNING TASK | See also Classroom Mapping Analysis in Chapters 3 and 4 of this report  
Appendix B: Section 2(Q2) |
| Question (c): Which subjects are best suited to particular types of grouping?    | E: SUBJECT    | See also Classroom Mapping Analysis in Chapters 3 and 4 of this report  
Appendix B: Section 1(Q 1 – 3) |
| Question (f): How can pupil grouping be used to improve transfer and transition between schools and Key Stages, particularly primary to secondary? | F: TRANSFER   | Appendix D: Section 1(Q1 – 4) |
| (Additional Thematic Focus)                                                       | G: PUPIL/TEACHER DEVELOPMENT | Appendix C: Section 2(Q7 – 10)  
Appendix E: Section 1(Q4) |
| Question (b): How do timetabling and classroom organisation accompany particular types of pupil grouping, in particular to meet the pupils who are working well below, or well above the national average? | H: ACHIEVEMENT | See Classroom Mapping Analysis in Chapters 2 and 3 of this report |

* Includes pupil and school characteristics (particularly ability) & strategic/operational use of teaching assistants (TAs)
Chapter 3: Pupil Grouping Strategies at Key Stage 2

3.1 Introduction
In the following chapter, data from the 12 primary case study schools are used to develop each of the eight themes identified in Chapter 1 (section 1.2 or Chapter 2, Table 2a). These data originated from two different sources: from the 82 classroom observations and mappings undertaken during the course of this project and from the thematic analysis of 132 interview respondents. This chapter has 8 main sections, each section representing a key theme. In each section a summary of the findings from the thematic analysis of the interview data is provided, followed by a descriptive analysis of classroom mapping data. Each section is then summarised, drawing together these two strands of data and relating findings to the original research questions.

3.2 Descriptive Analysis of Key Stage 2 Classroom Maps

3.2.1 Schools sampled
Table 3a identifies the 12 primary schools in terms of their innovatory pupil grouping strategies and also with regard to how they linked their pupil grouping practices with those of the secondary schools selected within geographic regions. Data on the proportion of mixed ability/setting within mappings for Year 6 and academic outcomes are also presented in this table.

3.2.2 Subject spread of groups observed in Year 6 classrooms
Data from the classrooms mapped was inputted at the ‘group’ level, representing weighted experience at the pupil level (see previous consideration of weighting in 2.3.2)15. In total, 2148 pupil groupings were observed in the 82 classes observed. The range of subjects observed varied between schools (Table 1a), depending on subjects taught on days agreed for observation16. Of the groups observed, 35.6% occurred during a literacy lesson, followed by numeracy (22.5%), science (11.0%) and design technology (DT, 8.0%). Other observations were made in the humanities subjects, physical education (PE), information and communications technology (ICT), personal, social and health education (PSHE), drama and religious education (the remaining 22.9% of observations).

3.2.3 School Grouping Strategies, Innovations and Achievement
Table 3a provides a general description of the case study schools and their grouping strategies in relation to academic achievement for Key Stage 2 results per school. These results focus only on the level 4 attainment for the core curriculum subjects (numeracy, literacy and science) and were compared to average results for the local authority and nationally (for maintained schools) as well as KS1 to KS2 value-added scores. The table also provides proportions of lessons observed within each school that were mixed ability or set and identified any innovatory practice undertaken in the school. The relationship between pupil grouping, achievement and innovatory practice is considered later in this chapter.

15 Readers should note that results reported from the mapping data was based solely on the observations within each of the 12 primary schools; these results are representative of the observations made in the case study schools only.
16 With regard to observations undertaken in primary schools, the terms literacy and numeracy refer to those classroom sessions specifically allocated to the teaching of literacy and numeracy rather than the broader subjects of English and mathematics.
Table 3a: Grouping Strategies in Primary Schools, Innovations and Core Subject Attainment at Key Stage 2

<table>
<thead>
<tr>
<th>School</th>
<th>% Mixed Ability Observed in Year 6 1</th>
<th>Selection Criteria</th>
<th>LA: Percentage of pupils per school above (+) or below (-) LA average 2</th>
<th>National: Percentage of pupils per school above (+) or below (-) national average 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>English</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Ap1</td>
<td>49.8% Feeder for AS1</td>
<td>-12 +14 +9 -0.42 -19 +9 +5 -0.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ap2</td>
<td>16.9% Feeder for AS2</td>
<td>-6 -16 -11 -1.27 -2 -22 -15 -1.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ap3</td>
<td>100.0% Feeder for AS3</td>
<td>+23 +27 +11 +0.28 +16 +22 +7 +0.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bp1</td>
<td>62.5% Urban</td>
<td>-35 -33 -21 -2.33 -37 -36 -22 -2.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bp2</td>
<td>100.0% SPRinG</td>
<td>+12 +11 +13 +0.47 +10 +8 +12 +0.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bp3</td>
<td>100.0% Urban</td>
<td>-4 +4 +3 +0.97 -6 +1 +2 +1.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cp1</td>
<td>58.1% Feeder for CS3</td>
<td>-30 -36 -35 -1.02 -31 -30 -36 -1.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cp2</td>
<td>100.0% Feeder for CS3</td>
<td>-8 -14 +1 -0.82 -9 -18 0 -1.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cp3</td>
<td>70.3% Feeder for CS2</td>
<td>-1 +1 -1 -0.32 -2 -3 -2 -0.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dp1</td>
<td>85.8% Urban</td>
<td>-17 -16 -9 -0.27 -19 -18 -10 +0.18</td>
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<td></td>
</tr>
<tr>
<td>Dp2</td>
<td>100.0% SPRinG</td>
<td>0 -22 -22 -0.93 -2 -21 -23 -0.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dp3</td>
<td>100.0% Transition classes</td>
<td>-6 +9 +8 +0.64 -12 +3 +3 +0.78</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Proportion of organisational grouping, identified above, represents only those lessons observed in each of the case schools.
2 Key Stage 2: Percentage of pupils per school scoring at least Level 4, compared to general LA results per subject
3 Key Stage 2: Amount of KS1-KS2 Value-added above or below LA average
4 Key Stage 2: Percentage of pupils per school scoring at least Level 4, compared to general national results per subject
5 Key Stage 2: Amount of KS1-KS2 Value-added above or below national average for maintained schools

3.3 Theme A: The Purposes of Pupil Grouping

In half of the primary schools visited, children were taught in classes set by ability in mathematics and English; other subjects retained a mixed ability structure. Using setting as a strategy for reducing the number of pupils in the lower ability set groups and providing more individual attention for these pupils (for example, Ap2) was not as common as was found in secondary school observations (see Chapter 3). Teacher interviews concerning the seating of children within their classroom identified that pupils invariably sat according to teacher-made seating plans, which were driven largely by: wanting a good gender and cultural mix (for example, Ap3); according to within-class differentiation of ability (for example, Bp1); friendship groups if these were seen to be effective in promoting learning and keeping pupils on-task (for example, Ap1); or according to the specific requirements of particular subject sessions.

A range of initial views about the use of pupil grouping was expressed by teachers, pupils and school managers:

32
“Most of them prefer to work in pairs….I think they feel more involved. I think in a larger group it is easy to be left out” (teacher).

“I just think that if you’re in a mixed group then it’ll be better because people go “ooh we’re the cleverest table” because we’ve got all the cleverest people, and you have the teacher all the time, so I think we should all be mixed” (Year 6 pupil).

“The children at the top of the lower set, however you set it, would not be too different to the people at the bottom of the upper set. We are talking a very small difference. So you need to make sure that you have got the right sort of work, and that’s where you differentiate the work” (Head teacher).

These quotes represent a range of views held by different members of the same school. The teacher shows a perceived understanding of pupil preference by group size, while the pupil preferred that grouping was not differentiated by ability. And the head identified that when setting was in use, it still did not provide a clear strategy for differentiating work for individual pupils.

Two of the case schools combined all of their Year 5 and Year 6 classes (Bp1 and Cp3), resulting in average class sizes of 24 pupils – this combination took place because of low pupil numbers in each age cohort rather than for pedagogic purposes. In one school (Bp1), Year 6 pupils were differentiated in class by being given their own work to complete and by sitting at their own table. Combining year groups to increase class size did cause some problems. In Cp3, some of the pupils in Year 6 stated that they resented this mixing with Year 5, seeing the combining as reaffirming that they had not ‘moved on’.

In general, the pupils in the classrooms observed sat, for most of their classroom time, at tables in small groups. Seating around tables (technically in small groups) was not directly related to the activity they were undertaking (that is, whilst seated in small groups, pupils were infrequently asked to undertake group/collaborative learning tasks (a maximum of 38% of the observations): seating was largely organisational. Large pupil groups/whole classes were observed undertaking individual learning activities in most classes. Pupils were also able to come together in groups in many of the classes observed during Circle Time17, although the potential of this format was not fully explored in this study and it was rarely observed in classrooms.

From several teachers’ point of view, grouping within the classroom was based very much on the physical design of the classroom, the perceived ability and (lack of) social skills of their pupils, and the extent they needed to differentiate work across different abilities within their class. Teachers used the tables (that characterised all of the primary school classrooms), but did not move the tables around to suit teaching purposes. Children were often seated with others of the same ability level, within mixed ability classes, and they were only moved if they misbehaved.

17 As an activity within the classroom, Circle Time brings all pupils and their teacher together (sitting in a circle), for briefing and debriefing discussions. Normally Circle Time allows individual pupils to identify and discuss their concerns in a non-hostile environment (also see Curry & Bromfield, 1994).
“We don’t have a regimented policy for seating, but normally children are seated at particular tables according to ability, sometimes they are moved for behavioural issues” (teacher).

At a school level, grouping reflected a wish to raise achievement in numeracy and literacy; as the head teacher below noted, ability-based grouping was believed to be beneficial at a school policy level, as it instilled in successive cohorts the necessary skills for ‘effective’ learning.

“We feel that the children below Years 5 and 6 need good models[provided by the children in the top mathematics and English sets found in Year 6] in the class so if they never see good writing, they never hear good reading, it’s very difficult to know what standard they’re aiming for and how they’re going to make progress” (Head teacher).

Interviews found that the majority of pupils were ambivalent about the way they were grouped within the classroom. This ambivalence may, in part, be explained by the possibility that pupils still had a large proportion of their time in class to interact with their friends and that the small groups sitting around tables provided a good basis to work with a partner (rather than the whole group).

I think we should have tables like that, like we’ve got there [tables of four pupils]. I think then it’s quite easy because it’s like one to one….and you’ve more chance of being with your friends (Year 6 pupil).

Mapping data
It was also possible to address this research theme in a number of ways using the classroom mapping and observation data.

Did the primary schools in the sample vary significantly in their general strategy of grouping of pupils?
From the mappings of children working in their classrooms, it was clear that the majority of pupil experience (in all of the case schools) took place in mixed ability classes; only 20.9% of the observations took place in set classes. There were no case study schools that set children for all observations; even within one school (Ap2) where virtually all observations were undertaken during numeracy and literacy ‘hours’, nearly 20% of lessons were mixed ability. Mathematics and English were the only subjects set in any of the schools (44.1% and 31.0% of observations within these subjects respectively). Within mixed ability classes, and in the mapped observations where a judgement could be made regarding ability level, most pupils were organised in mixed ability groupings.

Mapping also considered the relationship between year group and approach to ability grouping. Combining information from primary and secondary case studies shows the proportion of organisationally set classes observed increased between Years 6 and 9. Findings here parallel those figures identified in Kutnick et al. (2005a): as children progress through their schooling they are more likely to find themselves organised by differentiated ability (setting), especially with regard to mathematics and English (Table 3b).
Table 3b: Percentage of setting by Year in the 24 case study schools

<table>
<thead>
<tr>
<th>Percentage of observations made in ‘set’ groups (mathematics and English)</th>
<th>(%) Year 6</th>
<th>(%) Year 7</th>
<th>(%) Year 8</th>
<th>(%) Year 9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21</td>
<td>24</td>
<td>39</td>
<td>59</td>
</tr>
</tbody>
</table>

Mapping also considered whether particular curriculum subjects drew upon/preferred to use particular types of groups. In primary schools, the most frequently found group size was the small group (of 4 - 6 pupils; 33%), followed by whole class (26%) and dyads (22%), with smaller proportions of triads (13%), individual (5%) and larger groups (of 7 - 10 pupils; 2%). During their ‘working’ time in class, there was considerable variation of group sizes across curriculum areas: numeracy, like literacy, mainly used the small group for working in class (35% and 30% respectively), followed by whole class (28% and 26%) and dyads (26% and 22%); science was taught predominantly as whole class (51%) or small group (41%); and humanities were taught predominantly as dyad (61%) or whole class (29%). All curriculum areas used a range of pupil group sizes for classroom work, but there appeared to be a strong underlying reliance on the table-based small groups. Apparent reliance on this small group/table across subjects (and learning tasks) has been previously identified in the literature as a convenience dictated by furniture arrangement rather than the result of pedagogic planning (Hastings and Chantry, 2002).

Summary
Interviews and mapping showed that there was some variation in the stated use for organisational grouping in the primary schools. Heads referred to both setting and mixed ability as a means to promote educational ‘benefits’, especially in relation to pupils’ achievement. Teachers referred to particular forms of grouping as a means to control pupil behaviour, and pupils identified preferred group/working sizes. Mapping showed, though, that the table-based small group was the most common group size in classrooms, across all subject areas. Other than the clear use of set groups for numeracy and literacy, there seemed to be little variation in group size according to ability. The evidence from the case studies showed that children preferred to learn in small groups.

3.4 Theme B: Pupil Grouping, Inclusion and Diversity

Evidence from the different interviews suggested that some of the primary schools approached the issue of inclusion in similar ways to their secondary counterparts (see chapter 4). There were some schools that separated out their pupils with particular learning needs (whether this was because they were high achievers or because they had special educational needs) into different class groupings and provided tailored teaching for these groups (for example Ap1, Cp1). Neither teachers nor pupils provided comment on this observation. Pupils with SEN were likely to be treated as a specific group of pupils who were distributed across the different classes in the year. Under this system, pupils received focused attention by being withdrawn from their classes and given additional support by the SEN teacher or a teaching assistant (see for example Ap2). Some pupils appreciated being given this focused attention for part of their school day:
“It’s a better way to learn….we get more concentration. We can’t hear noise because it’s calm and we can hear the teacher better” (Year 6 pupil with SEN).

In comparison, withdrawal also meant that these pupils with SEN ‘missed out’ on an amount of the curriculum being followed by the rest of the class; this withdrawal may have excluded them from ongoing discussions and learning opportunities within their classes (during absence and upon their return). Mixed ability classes were composed of the full ability range, and included pupils with behavioural problems (see for example Bp1, Bp2, Cp3). Having to differentiate learning tasks for the ability range as well as coping with behavioural difficulties was seen as a problem for many teachers. In this context, one teacher reflected that a way to overcome the differentiate problem was to use a teaching assistant.

“It makes a huge difference having a support assistant in the class” (teacher).

Given the range of attainment found in these mixed ability classes, it was curious that the teachers did not mention any strategies that would have promoted social inclusion within their classrooms (for further information, see theme ‘G’). Teachers’ focus on and use of withdrawal based on SEN assessments (a diversity strategy) can be seen as promoting an exclusive rather than inclusive practice (see discussion in Chapter 4).

Mapping data
Classroom mapping showed that there were no differences in the general distribution of ‘working’ group size in relation to setting or mixed ability classes. Both types of organisational grouping drew, in the main, on small groups, followed by whole class and dyads; variation was within one percentage point. Most of the variation in group size was found in numeracy and literacy classes. Low ability pupils were taught predominantly as a whole class (52%), followed by small groups (24%). Middle ability pupils were taught mainly in small groups (44%), followed by whole class (36%) and dyads (18%). High ability pupils were taught in a range of small groups (36%), dyads (29%) and whole class (25%).

Given that there was variation in the use of group sizes in the classes set by ability, some consideration regarding group size could be made in relation to the type and quality of communication/discussion that may take place within the different group size. For example, the use of small and dyadic groups may be seen to promote collaborative discussion and high levels of participation among high ability pupils but larger groups often inhibit that discussion. Middle ability pupils were observed in small and dyadic groupings, but were observed in whole class grouping for over one-third of their time. As the whole class setting was used predominantly for low ability children some questions can be raised as to whether these children were encouraged to participate in whole class interactions, allowed to communicate with peers and under a steady control by their teachers. The literature on whole class grouping (see Merritt, 1994 and others) stresses that this grouping allows teachers to: a) ‘present’ information (but is unlikely to encourage general responsiveness by pupils); and b) to maintain a watchful, ‘controlling’ eye over behaviour in the classroom.

Summary
The evidence suggests that the organisational strategies employed by these schools reflected more the mix of children, including those with SEN, the schools took in from their respective
catchment areas than some more generalised overarching approach to inclusion. Certainly, those schools with a large and diverse ethnic population (for example, Bp1) were very aware that this should be their focus. Integration of children with diverse learning needs was a key issue for these schools – rather than segregation with its concomitant draw upon staff and resources. However, application of policy with regard to pupils with SEN appeared more likely to separate these pupils from others in their classes. More generally, classes that were set by ability offered different grouping experiences for high and low attaining pupils; where higher ability pupils tended to work for more of the time in smaller groups, and lower ability pupils tended to receive a much larger amount of whole class teaching. The research question was not fully answered in the findings above, although it can be stated that organisational and within-class grouping appeared to offer different experiences to pupils at different levels of attainment.

3.5 Theme C: Pedagogical Foundations of Pupil Grouping

Within the classroom, teachers adopted a number of different grouping strategies. There were some teachers that simply grouped pupils at tables according to their ability as a means of easing the process of giving out differentiated work (Bp1 for example). More often, pupils were grouped for the majority of their time in the classroom in three different ‘contexts’. Pupils were either seated: as a whole class (often at tables of 4 - 6 pupils) in front of the whiteboard or the teacher; seated at their tables with other pupils in small groups but undertaking individual work; or, occasionally, seated according to a given task (such as for paired work or collaborative, small group discussions; e.g. Cp1). This latter context was not common in the observations made and was not specifically flagged up by teachers as an informed approach to supporting group work. Very few teachers articulated what effective group work entailed, other than that it required careful monitoring. The teacher below stands out in her consideration of effective within-class group working – noting both the importance of identifying criteria for group success and identifying successful/unsuccessful group working processes (these are aspects of planning for group working drawn upon in the SPRinG programme and used in Bp2):

“I think you need to be very clear in what they are doing, so that they are quite structured, like with the success criteria [of the task] and things like that. And in the debriefing which I forget to do I have to say, just saying more about how/why did your group work well” (teacher).

Mapping data

From the perspective of the classroom mappings and observation, the ability composition of classes and size of groups used within classes became the main focus for analysis. As with the analysis that will be presented in Chapter 4, a number of social pedagogic issues are addressed.

Different teaching and learning strategies used in set and mixed ability classrooms:

Within Year 6, it should be noted that comparisons between setting and mixed ability (organisational) grouping only focused on mathematics and English, as these were the only subjects that used both setting and mixed ability. Initial comparisons revealed that classroom contexts appeared very similar for these organisational groupings: the size of grouping was very similar in either organisational group (predominantly small groups of 4 - 6 pupils), followed by whole class and dyads. While group sizes were similar, the function of these groups was different: in set classes small groups were a convenient seating arrangement for whole class
teaching and in mixed ability classes most children sat around a table were working as a small group. There was little difference in the pattern of interpersonal interaction in set and mixed ability classes observed: children mainly worked as individuals (45% of the observed grouping patterns in set, and 39% in mixed ability classes); as a group (36% of the observed grouping patterns in set and 43% in mixed ability); and as a whole class (19% of the observed grouping patterns in set and 18% in mixed ability). There were a number of differences with regard to type of learning task undertaken: children in set classes were more likely to undertake ‘application of existing knowledge tasks’ (79% of set class tasks compared to 46% of mixed ability tasks); and pupils in mixed ability classes were more likely to undertake ‘new knowledge’ and ‘practice’ tasks (21% in mixed ability compared to 10% in set for new knowledge and 26% in mixed ability compared to 11% set for practice). These differences in orientation to learning task by organisational grouping suggest that set classes were more focused in using their current knowledge (perhaps for assessment) while mixed ability classes drew upon a greater range of learning tasks; future research may wish to explore the specific relationship to the range of these learning tasks and attainment scores.

The mapping also revealed that teachers (or teaching assistants) were more likely to be found working with pupils in set classes than mixed ability classes (68% of observations in set classes compared to 46% in mixed ability classes), and within the set classes, teachers were most likely to work with the whole class (80% of observations with teacher present). These maps may indicate that teachers of set classes are more didactic in their teaching approaches; however, this would need exploring further.

Finally, composition of pupil groups within set and mixed ability classes had some similarities: teachers composed the vast majority of groupings (over 76% in either type of class). Researchers were unable to determine the friendship/non-friendship mix in the observed classes, but found that pupil groupings in set classes were predominantly single sex (71% in set classes compared to 41% in mixed ability) while groupings in mixed ability classes were predominantly mixed-sex (57% in mixed ability compared to 29% in set). This composition of pupil grouping may have implications for classroom inclusion, with the mixed ability classes demonstrating higher levels of inclusion than set classes.

Different teaching and learning strategies used in relation to group size and other social pedagogic issues in classrooms:
The ‘weighted’ analysis of group sizes in Year 6 classrooms found children were most often grouped/seated as small groups of 4 - 6 children (32.4%), a whole class (26.9%), dyads (22.1%), triads (12.5%) and as individuals (4.6%). Placement in a seating group contrasted with social interaction to support classroom work as shown in Table 3c. The most dramatic contrast related to the difference in individual seating and work/interaction, where only 4.6% of pupils sat as individuals but 40.2% of general work assignments were focused on the individual pupil (as described in previous research by Galton et al., 1999). Pedagogically, working as an individual was most likely to take place while seated in a small group – and this social setting for individual tasks may force the child ‘off-task’ especially as children may engage in social conversation with friends/peers during this task/working time (Kutnick and Jackson, 1996).
Table 3c: Relating Seating Group to Interaction/Working Group in Year 6 Classes

<table>
<thead>
<tr>
<th>Pupil grouping</th>
<th>(%),Seating Group of Pupils</th>
<th>(%),Types of Action/Interaction Assigned during Lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>4.6</td>
<td>40.2</td>
</tr>
<tr>
<td>Dyads, triads and small groups</td>
<td>67.0</td>
<td>41.3</td>
</tr>
<tr>
<td>Whole class</td>
<td>26.9</td>
<td>18.6</td>
</tr>
</tbody>
</table>

Summary
The observations and mappings of the different classrooms, together with the comments and reflections of both teachers and pupils on classroom groupings, suggested that little has changed in the primary classroom since Galton last surveyed it some seven years ago (Galton et al., 1999). Children in primary classes still largely sat around tables in small groups, but tended to be assigned individual work. Very little group/collaborative work was observed in these classrooms. Teachers also seemed largely unaware that effective grouping practices in classrooms required training and application of specific skills (e.g. Bp2) by children and supportive practices by teachers; these group working skills are not simply accumulated through general classroom experience over time. Social pedagogically, there were few instances of an organised relationship between teaching strategies, learning tasks and pupil groupings that would support such strategies and tasks. Although based on a limited sample of schools, it suggests that teachers need to give greater consideration as to whether the within-class groupings that characterise their classes are likely to promote or inhibit children’s learning as identified in theme D.

3.6 Theme D: Relationships Between Learning Task and Pupil Grouping Choices

Interviews found teachers only drew weak relationships between the learning task and the type of grouping employed in their classrooms - other than where topics were being introduced and whole class grouping predominated. In addition, differentiation by seating arrangements seemed to be a relatively widespread approach to teaching and learning in these classrooms. Teachers were aware that learning tasks should be appropriate for the specific pupils asked to undertake the task, but many of their explanations only focused on the task and did not consider how it would be undertaken in the social context of the classroom:

“I think really it’s finding the right task….and explaining the task well so that they know exactly what they’ve got to do” (teacher).

In comparison, some teachers were also aware that the ‘wrong’ type of pupil grouping could inhibit a task being undertaken successfully; in this case, too large of a group was seen to impede progress:

“When we did that work on gadgets I knew that if there were too many children ….just two children would do the work and somebody else might say something, the odd comment” (teacher).
Mapping data
Of the learning tasks observed in the mapping, application of existing knowledge was seen most frequently (52.4%), followed by practice and revision (27.9%) and introduction of new knowledge (19.7%). In line with some social pedagogic qualifications (Blatchford et al., 2003; and displayed in Table 3c), it was observed that these learning tasks may be hindered by the actual types of interaction that pupils were assigned to use and the seating while undertaking the learning task.

Table 3c: Percentage (by row) comparison of learning tasks to interaction to support learning task and seating during learning task (based on observations of case classrooms)

<table>
<thead>
<tr>
<th>Learning task (% of learning tasks)</th>
<th>Interaction to support learning task</th>
<th>Seating during learning task</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Individual %</td>
<td>Small Group %</td>
</tr>
<tr>
<td>Intro/new knowledge (19.7%)</td>
<td>51.4</td>
<td>25.7</td>
</tr>
<tr>
<td>Application/Extension (52.4%)</td>
<td>43.0</td>
<td>39.5</td>
</tr>
<tr>
<td>Practice (27.9%)</td>
<td>52.1</td>
<td>14.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>47.2</td>
<td>29.7</td>
</tr>
</tbody>
</table>

In particular, new knowledge tasks were most likely to take place with pupils working as individuals (51.4%) while pupils were seated (in the main) as a whole class (61%). With regard to new knowledge, pupils were not likely to be found in discussion with peers – in all probability they were being exposed to new knowledge by their teacher and asked to reflect/work on these tasks as individuals. Similarly, application tasks that would benefit by discussion among pupils were most likely to take place with pupils working as individuals (43.0%), although about a third of these tasks took place in small groups. While undertaking these application tasks, pupils were mainly seated as a whole class. Practice tasks took place predominantly as individual work (52.1%), but more than 80% of these tasks took place in whole class or small group seating; allowing social distractions to interfere with completion of individual assignments. Teachers or teaching assistants were found to be working with children in about 60% of each learning task type, but these adults were most prominently found associated with new knowledge tasks (approximately 68% of these tasks); this suggests that orientation to new knowledge was more likely to be teacher dictated rather than pupil discovered. Teacher association with new knowledge tasks has been explained in the literature (Kutnick et al., 2002 & 2005b) as promoting teacher sanctioned knowledge but offering restricted opportunity for pupils to develop their own understanding through discussion.

Complementary to the role of teacher presence and focus on new knowledge was the finding that a substantial proportion of pupils worked with no adult direction or observation (about 40% of the observations). This lack of direct adult interaction suggests that a large part of pupils’ working days must be either self-directed or pre-planned by their teachers. Working
autonomously from the teacher in this way does require planned learning tasks that can be undertaken without constant teacher direction and support, either undertaken individually or in small groups. Mapping could not provide evidence of whether teachers planned or supported this autonomous learning. Comparing the schools that used setting for mathematics and English with mixed ability in other schools, very few differences in grouping or teaching and learning practices were identified.

**Summary**

There was little or no evidence that teachers or schools tailored task and grouping composition together in any active way. Pupil groupings in the classroom, and as a general policy for these primary schools, revolved around differentiation and achievement rather than more broadly-defined fitness for purpose between task and group composition. Thus, teachers expressed concern that learning tasks needed to be appropriate to support the learning of their pupils, but appropriate did not include consideration of the social context within which the learning task took place. In this respect, there were mapped examples of within-class pupil groupings being too large or too small to undertake specific learning tasks, teacher domination of new knowledge tasks, and concern that a substantial proportion of learning tasks were undertaken by pupils working autonomously from their teacher but with little training or support in how to work in this autonomous situation.

**3.7 Theme E: Pupil Grouping Strategies in Different Subjects**

Teachers outlined in their interviews that the most common use of specific pupil grouping was by ability in literacy and numeracy. Other subjects were taught as mixed ability groups and, within the classroom, these groupings reflected a rather ad hoc arrangement of differentiation according to ability, the physical layout of the classroom, and to some extent the availability of resources. There was also a lack of knowledge about, or a lack of self-confidence in approaching, teaching and learning through a collaborative group work approach. While teachers acknowledged the role of organisational grouping with regard to set and mixed-ability subjects within the curriculum, many did not see that group working skills were part of the curriculum (and curriculum pressures did not allow time to integrate these skills into the classroom day):

> “Maybe it’s that they [the pupils] are not used to doing group work, so they haven’t got those skills but as a Year 6 teacher I don’t really the time to teach those skills as well as teaching them what I am trying to teach them” (teacher).

Another teacher did not appear to trust her pupils to work in collaborative groups:

> “I rarely use collaborative group work in literacy/numeracy ‘cos some pupils dominate or don’t do any work. I did one journalism collaborative project and found it too much going ‘round ensuring that they’d divided the work, they were all making contributions…” (teacher)

Whilst another teacher did see some advantages of sharing work within pupil groups:
“Mixed ability can work well in science, when you have someone who can help to push along or can demonstrate something to a child who needs help. Again, it can help with the social aspect, two children from a different background, sharing ideas…” (Teacher)

Teachers’ views concerning subjects and grouping brought out a mixed range of responses. Generally, they differentiated set subjects (e.g. mathematics and English) from mixed ability subjects in their use of grouping. Further, few teachers (except Bp2, cited earlier) stated that they were able to plan for the time to help pupils develop their group working skills; these skills were not seen as a necessary aspect of the curriculum.

Mapping data
It has already been noted that in primary schools, setting was only found in mathematics and English, and this setting only occurred in half of the case schools. While organisational grouping strategies (setting or mixed ability) showed differences between subjects (mathematics and English compared to all other curricula), this difference did not characterise types of learning task assigned by subject, task-based interactions within classrooms, group size or seating arrangement. Mismatch between learning task and organisation may in part be explained by the acknowledgement that nearly all the curriculum areas were taught to the whole class by their class teacher; and teachers tended to use consistent pedagogic approaches across all subjects. Maps showed that the main seating arrangements were whole class seated around tables and small groups seated around tables (72.5% of observations), and science and literacy were the only subjects where pupils were seated as a whole class in rows (and this only took place in two of the case study schools). Similarly, the size of pupil groupings was strongly related to seating, mainly as small groups and whole class, although in the core subjects of numeracy and literacy (as well as humanities and drama) there was a substantial amount of pairs (dyads) used within the table-based seating. Further, as seating groups became larger, pupils were more likely to be asked to interact with partners. This potential increase of interaction with partners could only take place if teachers set up the classroom environment, tasks and pupil skills to participate collectively in learning.

The type of learning task in primary school lessons observed was predominantly application of existing knowledge for core and other subjects, with high levels of practice (more than 50% of observations within subject) found in art, dance and PE. Analysis of interaction to support these learning tasks by curriculum subject did conflict with some social pedagogic expectations. Most tasks in literacy, humanities, art, RE, ICT, drama and PSHE were assigned to individual pupils, but the application of existing knowledge (the learning task that predominated in these subjects) should be facilitated a small group or dyadic interaction. It appeared that teachers in literacy, humanities, art, etc., placed strong expectations on individual work by pupils without considering how the same topics could be undertaken collaboratively or, alternatively, in a more individuated classroom context. Numeracy, science, DT and dance were the subjects most likely to combine application tasks with group interaction.

Summary
Specific organisational grouping patterns according to subject were only evident for the core subjects of mathematics and English. Other subjects adopted a number of different approaches and, in the main, the patterns observed in the classroom reflected individual teacher expectations and preferences rather than a systematic approach to pupil grouping. There was no clear evidence as to particular subjects being ‘best’ suited to particular pupil groupings. As identified
previously, pupils were mainly seated around tables but not asked to work collaboratively with partners. Even when some collaborative working was identified by teachers, many children did not have, and were not offered, the skills that would enhance their work in groups.

3.8 Theme F: Continuities of Pupil Grouping Strategies at Key Stage Transition

Planning for and activities that support transfer and transition between primary and secondary schools varied enormously between the case schools. Some schools (Ap2, Cp1, Cp2) had extensive links for the transfer and transition of pupils between KS2 and KS3. These links encompassed visits from and to the secondary schools, exchange teaching, social events, special attention to how Year 7 form groups were composed, and identifying those pupils at potential risk during the move from their primary to the new secondary school. However, there was also evidence that communication between primary and secondary schools was sometimes lacking in terms of the basic understanding of each other’s grouping policies and practices. Thus, in the case of Cp3, which had the vast majority of its pupils moving to Cs2 during the KS2–KS3 transition, there was an obvious discontinuity between the set classes of the primary school and the mixed-ability classes that were found at the secondary school. The Year 6 teachers seemed to be unaware of this and, when asked about it, did not seem to think continuity of organisational grouping was important. To paraphrase some of Cp3 teacher comments, it was noted that:

- teachers were unaware of the mixed ability grouping that characterised the lower years of Cs2;
- teachers were sceptical that any information passed on to Cs2 would not be used by the secondary school;
- teachers claimed that the secondary school was not aware of Key Stage 2 grouping policies and strategies; and
- teachers were aware that many of their pupils had developed negative images of Cs2 from their interactions with friends and relatives.

Summary

The case studies indicated that there were mixed views concerning transfer from primary to secondary schools. Grouping of pupils in relation to transfer was not referred to with any frequency in interviews; however, there were some feeder primary and their secondary schools that had developed very extensive links and programmes for pupil introduction to secondary schools. Other primary schools appeared to have little faith in transition planning, often citing reasons that their information would have little effect or credence.

3.9 Theme G: Group Work Training for Teachers and Pupils

This theme focused on within-class preparations to support pupils working effectively in groups, while undertaking their learning tasks. This research area has received only limited exploration in the literature (see Kutnick et al., 2005b), although it should be acknowledged that pupil groups are the most common social context found in classrooms. Perhaps not surprisingly, the interviews showed that there was very little evidence of professional development and classroom training/support for group working in the case study schools (from either the teachers or the pupils). Teachers, generally, did not mention that they had received training to enhance group working in either their pre-service training or in-service training. Lack of evidence did not mean
that none of those interviewed realised the importance of group working skills. More often, for teachers, group working skills were thought of as something that developed with experience, something that could be supported rather than specifically taught:

“They come through the school picking up those skills. It’s an intrinsic part of learning, being able to work with other people” (teacher).

And,

“I encourage them to discuss methods, strategies, check somebody’s work, questions them: if the answer’s wrong, ask them if they can see why so they’re taking responsibility for their own teaching as well as me...” (teacher)

Some pupils reflected generally on the usefulness of group skills for future employment:

“We need to start learning how to work as a group because like when we go to High School and college and university we’re going to be put in groups so we need to get trained how to work in groups” (Year 6 pupil).

Only in the SPRinG schools (Bp2, Dp2) did teachers mention the use of group work training for children:

- teachers reported that where SPRinG training took place (in specific year groups), both teachers and pupils benefited – the pupils being more effective in their learning and the teachers being more confident in their use of group work.

However,

- teachers needed to develop ‘fun’ group working activities and lesson plans that they could use and ‘pass on’ to others if group work was to be effective;
- only with training would group work be effective, even if these activities characterised one or two classes in a school this did not mean that effective group working would be found throughout the school; and
- effective group working needed to involve school management support and should be developed through a whole school policy.

**Summary**
The majority of teachers did not feel that they had been ‘taught’ effective group working skills in pre- or in-service education; though some mentioned it within the context of training related to the KS2 strategy. Further, the teachers were unlikely to consider the integration of group working skills within their classroom teaching. Some teachers and pupils realised that group working skills would be useful (as the children grew up); but teachers often assumed that these skills would develop without any training, encouragement or overt support. The few teachers and pupils that had received training in group working skills noted benefits of these skills in their classrooms. The teachers that used these skills also noted that training and support was not a simple classroom issue, but required support by school management and would be a useful whole school policy.
3.10 Theme H: Pupil Grouping and Achievement

Table 3a presents case school KS2 outcomes in relation to local authority and national levels. The table shows that the case study schools varied in their performance when compared to local and national levels. Of more relevance to this project, the table shows that case schools varied in their proportion of the use of ‘setting’ pupils, and schools that used setting only did so in mathematics and English. Case schools that used setting rarely performed at KS2 levels higher than their local education authority or national averages in those subjects; these schools were generally associated with negative value-added and subject scores locally and nationally. Case schools that used mixed ability to organise class grouping were generally associated with positive value-added, but this was not consistent across all of the case schools.

Within the case schools, two of the schools were associated with the SPRinG project. Both of these schools organised pupils in mixed ability classrooms, but only one of these cases showed positive value-added. The two schools that gained the highest levels of (nationally compared) value-added were innovatory schools; one was associated with the SPRinG project (Bp2) and the other had introduced a Year 6 transition programme (Dp3) in preparation for transfer to secondary school.

Summary
No clear or consistent conclusion can be drawn regarding organisational use of grouping and local/national achievement. The statistics quoted in Table 3a were taken from DfES Performance Tables (2005) and could not be related to any single class activity. Table 3a, though, does show that setting pupils for mathematics and English did not produce high levels of KS2 results – in fact, case schools that used setting scored consistently lower than schools that used mixed ability as an organisational grouping. The variation in both types of organisational grouping cannot lead to a simple explanation of a particular relationship between organisational grouping and achievement. One conclusion that may be that, within the case study schools, support and use of group working within-classes may be a route to more effective achievement (e.g. Bp2).

3.11 Summary Points and Policy Implications Arising from the Key Stage 2 Research
The following key points arise from this chapter:

- The highest levels of attainment, when considered against the national averages for English and mathematics, were seen in schools with mixed ability organisational grouping. The schools that used mixed ability as their organisational grouping scored (on average) 0.5% and 1.0% below the national averages in English and mathematics respectively. Schools that used setting as their organisational grouping scored (on average) 18.3% and 16.7% below the national averages in English and mathematics respectively.
- The accepted view of organisational grouping varied between pupils, teachers and Heads.
- Little consideration was given to different approaches to within-class grouping, as evidenced by a lack of relationship between seating, interaction, group composition and learning task. Pupil groupings tended to be dominated by the physical layout of the classroom.
• Low attaining children were not encouraged (by seating, learning task or interaction) to participate, and children identified as having SEN were most likely to be withdrawn from classes.
• Teachers rarely referred to social inclusion strategies or use of effective group work.
• There was little or no training for effective group work for teachers or pupils, while pupils worked for large amounts of time seated in small groups around tables without direct adult interaction and requiring (but often not possessing) autonomous skills.
• Given the low amount of planning/input concerning group work, it was not surprising to find little difference in grouping strategies between curriculum subjects.
• There were a number of differences found between set and mixed ability classes, especially in relation to learning task and interaction; but these need to be related to actual achievement.
• In terms of transition, there were few consistent views and policies described by schools.
Chapter 4: Pupil Grouping Strategies at Key Stage 3

4.1 Introduction

In this chapter, as for the primary schools in the previous chapter, data from the 12 secondary case study schools were used to develop the eight themes identified in the final table of Chapter 2 (Table 2a). These data, again, originated from two different sources: the thematic analysis of 146 interview respondents and the 83 classroom observations and mappings undertaken. Chapter 4 also comprises of eight main sections, again representing the key themes. In each section, a summary of the findings from the thematic analysis of the interview data is presented, followed by a descriptive analysis of classroom mapping. Each section is then summarised drawing together these two strands of data.

4.2 Descriptive Analysis of Key Stage 3 Classroom Maps

4.2.1 Schools Sampled
Table 4a identifies the 12 schools in terms of their innovatory strategies (for grouping of pupils) and the proportion of mixed ability/setting within mappings for Years 7, 8 and 9. Performance in core curriculum subjects at KS3 Level 5, were also compared with the corresponding local authority and national levels of academic attainment and value-added data.

4.2.2 Subject spread of groups observed in Year 7 and 9 classrooms
Data from the classrooms mapped was input at the ‘group’ level, representing weighted experience at the pupil level (see previous consideration of weighting in Chapter 2)\(^\text{18}\). In total, 1809 pupil groupings were observed in the 83 classes observed. Of the observed groups, the highest proportion (28.8%) occurred during an English lesson, followed by mathematics (19.0%), science (9.5%) and humanities (9.4%) modern foreign languages (MFL, 7.9%), music (5.1%) and drama (5.1%). Other observations were made in art, physical education (PE), information and communications technology (ICT), religious education (RE) and design and technology (DT).

\(^{18}\) Readers should note that results reported from the mapping data were based solely on the observations within each of the 12 secondary schools; these results are only indicative of the case study schools.
Table 4a: Grouping Strategies & Innovations in Secondary Schools: English, Mathematics and Science Subject Attainment in Key Stage 3

<table>
<thead>
<tr>
<th>School</th>
<th>% Mixed ability observed&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Innovation</th>
<th>LA (%/school achieving above[+] or below[-] average LA scores)&lt;sup&gt;2&lt;/sup&gt;</th>
<th>National (%/school achieving above[+] or below[-] average National scores)&lt;sup&gt;4&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>English</td>
<td>Maths</td>
</tr>
<tr>
<td>AS1</td>
<td>0.0%</td>
<td>Extended gifted and talented</td>
<td>-19.0</td>
<td>-3.0</td>
</tr>
<tr>
<td>AS2</td>
<td>43.1%</td>
<td>Performing arts college w setting</td>
<td>-20.0</td>
<td>-17.0</td>
</tr>
<tr>
<td>AS3</td>
<td>94.1%</td>
<td>2 Year KS3</td>
<td>+19.0</td>
<td>+20.0</td>
</tr>
<tr>
<td>BS1</td>
<td>73.9%</td>
<td>Urban Comp.</td>
<td>-3.0</td>
<td>+5.0</td>
</tr>
<tr>
<td>BS2</td>
<td>52.7%</td>
<td>Pupil voice, AfL&lt;sup&gt;6&lt;/sup&gt;</td>
<td>+13.0</td>
<td>+16.0</td>
</tr>
<tr>
<td>BS3</td>
<td>79.7%</td>
<td>Urban Comp.</td>
<td>-2.0</td>
<td>-8.0</td>
</tr>
<tr>
<td>CS1</td>
<td>100.0%</td>
<td>Urban Comp.</td>
<td>+12.0</td>
<td>+7.0</td>
</tr>
<tr>
<td>CS2</td>
<td>57.9%</td>
<td>Previously a SPRinG school</td>
<td>+17.0</td>
<td>+13.0</td>
</tr>
<tr>
<td>CS3</td>
<td>0.0%</td>
<td>Streamed/ nurture group</td>
<td>-37.0</td>
<td>-17.0</td>
</tr>
<tr>
<td>DS1</td>
<td>0.0%</td>
<td>Co-ed, single-sex classes</td>
<td>+18.0</td>
<td>+11.0</td>
</tr>
<tr>
<td>DS2</td>
<td>65.5%</td>
<td>Girls-only school</td>
<td>+16.0</td>
<td>+9.0</td>
</tr>
<tr>
<td>DS3</td>
<td>71.1%</td>
<td>Elevated Year 8 group&lt;sup&gt;6&lt;/sup&gt;</td>
<td>-3.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

1 Proportion of organisational grouping, identified above, represents only those lessons observed in each of the case schools.
2 Key Stage 3: Percentage of pupils per school scoring at least Level 5, compared to general LA results per subject
3 Key Stage 3: Amount of KS2-KS3 Value-added above or below LA average
4 Key Stage 3: Percentage of pupils per school scoring at least Level 5, compared to general national results per subject
5 Key Stage 3: Amount of KS2-KS3 Value-added above or below national average for maintained schools
6 Assessment for Learning.

This was a particular initiative designed to engage disaffected young black pupils by bringing them together as a discrete group for some lessons.

4.3 Theme A: The Purposes of Pupil Grouping
Data drawn from the case studies indicated that, in the main, the secondary case schools in the sample developed their grouping strategies as a means of addressing two principle (and often conflicting) concerns: the raising of achievement in core subjects, and the promotion of inclusivity in their schools. In schools that adopted a mixed ability approach to Year 7 form groupings, teachers suggested that pupils in such arrangements had the opportunity to mix with a wide range of other pupils and that this was beneficial for their school learning experience. Those schools that used setting for mathematics and, to a lesser extent, English, science and MFL (especially As2, Bs2, Cs3, and Ds1) justified this policy in both organisational terms (making it easier for teachers to teach) and in terms of inclusivity (pupils being taught according to their individual needs). Other schools (for example, As2, Bs1, Bs3, Cs1 and Ds2) made a conscious effort to create mixed form groups in Year 7, in terms of ability, gender, friendship, and pupils with SEN, although most of these schools introduced setting in many subjects by Year 9. Form groups may then be seen as reflecting the particular ethos of the school and in Year 7 this organisation of pupil experience was judged by a number of teachers as providing a ‘fair start’ for pupils within the ethos of their school.

“...the less able are greatly helped by a mixed ability group, like the quality of discussions, like someone will say something and bring the level up or someone will develop something someone else said....with group work and planning it well you can get the most able to explain things which will help their own learning” (history teacher).

Where disadvantages regarding mixed ability groupings were noted, these often reflected concerns that more support (for learning) was required or that disruptive pupils in these groupings made it difficult for other pupils to learn. These concerns were more likely to be expressed with regard to Year 9 than the earlier years in the secondary schools by teachers and pupils:

“...kids are held back in mixed ability classes, the brighter kids are held back....I think....it [mixed ability teaching] puts more work, more stress, more effort on the teachers. But whereas it was argued that the good kids would bring the weaker ones up, I think the opposite” (teacher).

“It’s crap [mixed ability classes]...you have to wait for other people to catch up, some people are cleverer than others....there are problems with class control” (Year 9 pupil).

Of those schools that set for particular subjects in Year 7 (normally mathematics, English and science, for example schools As1, As3, Bs2 and Ds1), interviews with school managers and teachers identified raising achievement via appropriate (ability-level) curriculum material and lesson structure as the obvious rationale for implementing such a strategy. Interviews further identified associated benefits of setting that included:

- the ability to focus upon particular groups in particular classes;
- the opportunity for pupils to move up or down in ability groups (hence a more responsive assessment system); and
- in some subjects, facilitation of learning if pupils worked with other pupils of similar ability (particularly mathematics) and away from friends.

[setting allows pupils to] “…move at a pace that reflects their ability” (Assistant Head teacher).
“...setting is used in the subjects that we considered setting appropriate for: maths, science, French. They are very different content depending upon your ability and we stick by the importance and value of mixed ability for subjects which deal with more emotional issues including expressive arts” (Deputy Head teacher).

Like the teachers and managers, pupils within schools that used setting supported their school’s differentiation by ability.

“...when we are in our groups, it is a bit easier because if you did have our actual form (mixed ability) group for maths, some people would be slow and do different work which is easier and they would get a bit confused.... we are all in together doing the same work so you can ask people next to you what they think because they are doing the same” (Year 7 pupil).

“...for things like maths, I have just been looking at the exam in the hall they are doing and the difference between Foundation and Higher is so massive that that works....for maths I think it does work” (English teacher commenting on setting in mathematics)

Interviews undertaken in schools that used setting were consistent in the explanation of its use and its perceived benefits; these interviews were undertaken with school managers, teachers and pupils. Yet, none of the interviews with teachers or managers found that they were aware that research studies or research reviews could not strongly relate setting or mixed ability (organisational groupings) to academic achievement (see Ireson and Hallam, 2001; Wiliam and Bartholomew, 2004).

It is interesting to compare the perspectives of setting and mixed ability as a form of organisational grouping with the performance at KS3 of the different secondary schools in the sample (see Table 4a, and further discussion in 4.10). Table 4a shows no clear achievement difference that can be attributed to setting in terms of KS3 results in the core subjects of English, mathematics or science, or KS2 to KS3 value-added scores in the case schools that took part in this study. Further, this was still evident even when setting was combined with one or more other initiatives such as gifted and talented programmes, or nurture groups19 (for example, As1 and Cs3). Thus, there was no overwhelming evidence to support the notion that setting lifts these particular schools above other schools at local authority or national levels. For example in some of the case study schools where pupils either fell just short of the top set or had managed to raise themselves out of the bottom set, they were often squeezed into a large middle set. Such middle sets represented a situation where, for effective teaching and learning to take place, the teacher must provide a significantly more differentiated curriculum. In large classes, which the middle sets tended to be (as smaller top and bottom sets were frequently created to allow more focused teaching to take place), such differentiation may be difficult to achieve (especially as seen in Wiliam and Bartholomew, 2004).

19 Nurture Groups are defined here as separate classroom-based groupings within the school in which children who are having difficulty with emotional/behavioural or educational issues can access the learning in a different form which seeks to address these issues more specifically than would otherwise be possible.
Interview data from schools Ds1 and Ds2 did, however, suggest that it may be worthwhile assessing the value of single-sex teaching in mixed ability schools/classes, but further data on the relative gender-specific performances is required (see for example, Younger et al., 2005).

With regard to the mapped data, analysis was undertaken to assess whether the secondary schools in the sample varied significantly in their general strategy of grouping (by ability or otherwise) of pupils. A majority of pupil group experience (56.3%) took place in mixed ability classes and approximately a third (35.7%) of the experience was in set classes. Only one secondary school (Cs3) used streaming, and this represented 8% of the observations. Also, whilst a majority of observed pupil experience was in mixed ability groups, there was only one school (Cs1) that used mixed ability grouping throughout KS3. Most schools had a proportion of mixed ability groupings, ranging from 94% mixed ability to 43% mixed ability. Three schools did not use mixed ability at all (As1, Cs3 and Ds1). Only one curriculum subject was dominated by setting: 77% of groups observed in mathematics were in set classes, although 47% of groups observed in English were in set classes (the high percentage of setting in English may be explained by the high proportion of observations made of English classes in Ds1). Lower levels of setting (20% to 30%) were found in ICT, science and MFL. Little or no setting was found in the humanities, PE, music, art, drama or DT lessons observed.

Relationships between the Year group observed and approach to ability grouping:
Replicating information from previous research (already introduced in Chapter 3, Table 3b), there was clear evidence from the mapping that as pupils progressed by year in school, they encountered higher levels of differentiation by ability in their groupings (see Kutnick et al., 2005). Based on the observations, pupils were found to be differentiated (by ability) in 24%, 39% and 59% of Year 7, 8 and 9 classes respectively. Table 4b identifies the various curriculum subject approaches for these groupings observed by year in school. Thus, while a few schools could be identified by the particular streaming or setting experience they offered to pupils, the vast majority of pupil classroom experience was to be found in mixed ability groupings although this differed by year in these schools. As identified in Table 4a, these ability group strategies were not consistently associated with differential attainment in the core curriculum outcomes at KS3 Level 5 (within their local authorities or nationally).

Relating pupil group size to setting and mixed ability:
Depending on the set to which a child was allocated, pupils received fairly distinct group-based experience. Pupils in mixed ability classes worked in nearly equal distributions of whole class (29%), small group (27%) or dyads (23%). Pupils in high ability sets were slightly more likely to work in whole class (34%), followed by dyads (25%) and small groups (20%). Middle ability sets worked predominantly as a whole class (64%), followed by dyads (28%). Low ability sets worked predominantly as individuals (47%), followed by whole class (28%). The working experience of low ability sets was distinctly different from other sets and mixed ability classes; in particular, those low ability pupils observed were rarely offered the opportunity to interact with peers in dyads or small groups. How these group sizes related to actual task assigned is considered under Theme D below.

Summary
The research showed that clear choices were made by the case study schools regarding whether or not to set pupils in the three core subjects of English, mathematics and science in Year 7. These choices reflected either a desire to address strategic issues regarding the raising of
achievement or to promote the inclusivity of the school. The implicit contradictions in such approaches were also clear. Where schools endeavoured to create mixed-ability form groups and to provide a timetable that allowed these form groups to stay together for different subjects, teachers were faced with teaching a diverse group of pupils (in terms of ability that had associated consequences and pressures for learning and resource differentiation). In addition, the placing of lower ability pupils or pupils with behavioural issues in mixed-ability classes presented particular difficulties for teachers outside those related solely to curriculum delivery. There was evidence from the observations that supported teacher and pupil views that poor classroom behaviour was a factor in restricting the tempo and focus of a significant number of classes in this study.

In the case study schools where setting was employed to overcome some of the mixed-ability issues and as a means of raising the achievement at KS3, other issues then emerged which had also been highlighted in previous research (see Wiliam and Bartholomew, 2004). By far the most common context for setting was in the subject of mathematics. Teachers identified mathematics as particularly suited to set groups. One of the main reasons given for setting was that it was possible to tailor particular work to the different ability groups and for all the groups concerned to make positive gains in terms of their understanding and achievement. Similar claims were also made (although less frequently) regarding the organisation by ability of science and English classes. Whilst such an approach had a clear logic in terms of accelerating the understanding of higher achieving pupils in mathematics and providing the opportunity to focus support and guidance for the lower achieving pupils, there remained a large and very diverse middle group of pupils.

The diversity of achievement at KS3 shown by the secondary schools in the sample, and the lack of a direct relationship with any particular initiative, points to a dislocation between strategy and outcome in these schools. It seems, therefore, that grouping strategies in the schools observed in this study centred on promoting the goal of ‘higher achievement for all’ through setting by ability or the use of within-class ability grouping in mixed ability classes. Ultimately, in the case schools observed by the four research groups, the performance of the schools were as likely to be determined by the macro socioeconomic factors that pertained in the area where the school drew its pupils and by the individual impact of the teachers and other staff on teaching and learning in the schools concerned.
Table 4b: Summary of Types of Organisational Grouping by Subject and Year Group at Key Stage 3 in Classes Observed (Percentages by row within each year group)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Year 7</th>
<th></th>
<th>Year 9</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Observations in set classes (%)</td>
<td>Observations in mixed ability classes (%)</td>
<td>Observations in streamed classes (one school) (%)</td>
<td>Observations in set classes (%)</td>
</tr>
<tr>
<td>Mathematics</td>
<td>66</td>
<td>21</td>
<td>13</td>
<td>100</td>
</tr>
<tr>
<td>English</td>
<td>34</td>
<td>57</td>
<td>9</td>
<td>72</td>
</tr>
<tr>
<td>Science</td>
<td>25</td>
<td>75</td>
<td>18</td>
<td>82</td>
</tr>
<tr>
<td>Humanities</td>
<td>100</td>
<td></td>
<td>21</td>
<td>79</td>
</tr>
<tr>
<td>Physical Education</td>
<td>71</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MFL</td>
<td>72</td>
<td>28</td>
<td>39</td>
<td>61</td>
</tr>
<tr>
<td>Art</td>
<td>74</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor Group</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious Education</td>
<td></td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>ICT</td>
<td></td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Drama</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design Technology</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

4.4 Theme B: Pupil Grouping, Inclusion and Diversity

Evidence from the different case schools suggested that the secondary schools in the sample approached the issue of being inclusive in three main ways. First, there were some schools that separated out their pupils with particular learning needs (whether this was because they were high achievers or because they were pupils with SEN) from other pupils in their Year. These separated pupils were placed in different form/class groupings and provided tailored teaching (for example, As1, Cs3, and to some extent Ds3). Some teachers considered this counter intuitive to the whole notion of inclusiveness.

“They have EMAG [ethnic minorities achievement grant] groups and a disaffected black boy group….I don’t agree with them…it segregates them when we’re not trying to” (teacher)

“Theyir self-esteem improves enormously from being included. Kids hate the stigma of being taken out of lessons. We have support lessons for handwriting etc. which they do during registration but I hate taking them out for it and they hate it so we do it during the break and lunch” (English teacher).

Second, pupils with SEN and ethnic minority pupils were treated as a specific group of pupils who were then distributed across the different form groups in the year. Under this system, other pupils that might also be thought within the inclusivity issue (e.g. the gifted and talented) were catered for by the use of setting in the three core subjects of mathematics, English and science.
Third, a small number of subjects/classes were organised to be truly mixed ability; these classes had a range of abilities and pupils (for example Bs1, As3 and Cs1). One teacher reflected on the fact that pupils nowadays were much more able to deal with ‘difference’ in their peer group than she had been as a child.

“…socially I think [a mixed groups of pupils] is very valuable. I think the kids here are far more instinctive than I ever was in a streamed school at dealing with people at different levels and accepting that people do have different special needs or are very bright.” (English teacher).

In terms of grouping by single gender as a means of promoting engagement, particularly of boys, there was mixed data regarding its value from teachers.

“...At the early stages [of a single gender class] they seemed enthusiastic…the boys liked it because they could throw themselves into it and the girls liked it because there weren’t interruptions from some of the boys but after a longer period [half way through the year] they came around to saying that they actually preferred being taught in mixed groups.” (mathematics teacher).

Boys (and to a lesser extent girls) thought that single gender classes were useful but mainly in terms of stereotypical portrayals of behaviour: girls not being tough enough and not getting involved in mixed gender groups, boys being too loud and lazy.

No matter how classes were organised in terms of inclusivity, within actual lessons many teachers moved pupils around within their classes for a number of reasons (none of which were found to related to inclusive mixes of pupils). From our observations, the main reason that a child was moved in class was to control behaviour by relocating misbehaving pupils (normally boys). A few teachers also reported in interviews that movement of pupils was also used as a way of generating more discussion and interest in the class with regard to the work they were doing.

“...it’s a good way of stimulating good behaviour in the lesson….it breeds an initial resentment if a child is told that they are not to sit next to someone they want to.” (English teacher).

Associated with the issue of inclusion and integration of low ability pupils in the classroom, observations identified several instances where low ability pupils were particularly disruptive in observed lessons and this had a significant impact on the flow and outcome of these lessons, and on the other pupils present.

**Mapping data**

Classroom maps found that classes organised by setting, streaming or mixed ability undertook a range of within-class practices that related to the respective organisational grouping. Pupils were much more likely to work as individuals in the one school (Cs3) that streamed pupils (pupils worked as individuals in 43.1% of classes in this school as opposed to 5% in set and 7.8% in mixed ability classes). Pupils were most likely to be responsible for the selection of others to become members of their groups within mixed ability classes (43.1% for mixed ability compared to 23.1% and 38.9% for set and streamed). Where pupils did not select group
members, the teacher arranged pupil groups within the classroom. The higher proportion of pupil-selected groups was also related to the higher proportion of friendship-dominated groupings in mixed ability classes than the other organisational types (45.0% in mixed ability compared to 20.7% and 20.8% in set and streamed classes). With regard to group-based interaction during classroom work time, in the one school that streamed pupils, pupils were asked to work on individual tasks without talking to others with a much higher frequency than other schools (65.3% of streamed observations compared to 28.5% and 15.4% in set and mixed ability types). There was little difference between organisational groups in types of learning task, although classes that were streamed were least likely to be assigned new knowledge tasks (5.6% of observations compared to 19.2% and 14.3% for set and mixed ability). Finally, teachers were found working with pupils in streamed classes more frequently when compared to the other organisational groups (77.8% compared to 48.4% and 63.1% for set and mixed ability). On the other hand, gender composition of within-class groups was equally likely to be same sex in all three types of organisational grouping (about 50% for all types, although due to the high proportion of individual groups in the streamed classes there was little evidence of mixed-sex grouping). Overall, the one school that streamed its pupils appeared to undertake a number of distinctive approaches that individualised pupils, did not allow small groups of pupils to work together, and maintained a high level of teacher presence.

Summary
Mapping, observation and interview data suggest that where pupils were included across all of the form groups in an effort to be more inclusive, changes in planning for teaching and learning were necessary and thus there was recognition of a need for within-class support. This support was, in part, provided for pupils with English as an Additional Language (EAL), pupils with SEN and the provision of more generic Teaching Assistants. This form of support, in turn, suggested that in order to sustain teaching and learning that is both effective and inclusive, schools needed to bring together diverse groups of pupils and put in place adequate resources to support such a pedagogical approach. There was still a feeling that arose from the comments of the staff interviewed that, to some extent at least, the rhetoric of inclusion was separated from the reality of what this meant in terms of teaching and learning in the classroom. There also seemed to be a pattern to the types of additional support that were available which corresponded to the relative ethnic mix of the pupil population. Thus, in contrast to schools As1, Bs1, Bs2, Bs3, Cs2 (within which ethnicity was not that diverse and where inclusivity took place at the level of the classroom), other schools with diverse ethnic pupil populations (for example As2 and Ds2) undertook initiatives (such as ‘partnering’ pupils from different ethnic backgrounds) that promoted inclusion inside and outside the classroom.

4.5 Theme C: Pedagogical Foundations of Pupil Grouping

Predominantly, pupils observed in the case study schools were seated according to three main principles: the physical layout of the classroom or laboratory, the availability of resources and equipment and the social/behavioural dynamics that pertained to a particular classroom group. These organisational imperatives significantly outweighed any pedagogical motives for particular groupings in the classes observed as the comments of this teacher reflect:
“...whole class teaching....chalk and talk...keep them in their seats and keep them quiet [laughs]...because I think kids respond to it here. And that’s what I’m best at so they accept it and respond to it.” (teacher).

The dominance of organisation and control over pedagogy was not surprising as successive studies have indicated that physical and behavioural organisation criteria predominate where pupil grouping in the classroom was concerned (see for primary Galton et al., 1980; Galton et al., 1999; Hastings and Chantry, 2002; for secondary Blatchford et al., 2005). From these studies, and from the observations made within this current research, it appears that there remains a pervasive inertia against implementing classroom level changes necessary to re-orient teaching and learning processes towards pedagogic concerns.

It was also evident, from the case schools, that teachers and managers, in contrast to the pupils themselves, often saw more issues than solutions in terms of the teaching and learning potential of group work. Overtly, where pupils sat (and with whom they interacted) was identified as a concern at the start of each academic year, and many teachers stated that they prepared a seating plan for pupils within their classes. Teacher did not articulate, though, whether these seating plans had a pedagogic basis – and soon after the start of the year pupils were allowed to change their seating placements as long as they did not disrupt the class.

“We find that pupils are mature about whom they pick to work with, and if it isn’t right we would change it.” (mathematics teacher).

A number of pupils have developed strategies that allowed them to sit with friends and engage in both task and non-task activity – as noted in one co-educational classroom where four girls sat around desks designed for two pupils. One of the girls related:

“At the start of the year, we had assigned seats. Now we sit with our friends, as long as we do not make too much noise.” (Year 9 pupil).

For the pupils, the opportunity to work in pairs or in small groups was seen as being positive, allowing them to exchange ideas and to discuss their own thoughts with their friends and fellow pupils (As1, Ds3 for example).

“We need to learn how to cooperate because if you’re in a business when you’re older you’re gonna have to learn how to get on with each other, not always arguing otherwise you’ll never make a decision and you’ll get fired.” (Year 7 pupil)

“It’s [pair work] less hassle. If there are four of you, well basically sometimes people like to be in charge and control what’s happening and others won’t like it so there will be a big confusion.” (Year 9 pupil).

“I think it would be better if we were able to have discussions in class...and teachers have said they don’t know whether we’re talking about work but they don’t give us a chance to talk to each other to prove that we can.” (Year 9 pupil).
At the same time, pupils also recognised that group work sometimes gave them the opportunity to engage in non-task related activity, but as yet the impact of such activity on learning has not been fully explored in the literature and was not addressed in this study.

**Mapping data**
Evidence from the classroom mappings and observations highlighted two factors underlying the formation and use of pupil grouping: the ability composition of classes and size of groups used within classes. These factors raise a number of social pedagogic concerns:

First, there was evidence that different teaching and learning strategies may be used in set and mixed ability classrooms. Two main types of findings consistently arose from secondary school analyses: (i) that pupils in mixed ability classes had a number of similar and different experiences from pupils in set classes; and (ii) among pupils in set classes, low ability pupils were placed in a different classroom setting (for teaching and learning) than middle and high ability pupils. Mixed ability classes, like set high ability classes, were likely to seat pupils in single-sex and friendship groupings for the majority of their work time. In low ability sets 47.3% of the pupils mapped were asked to work individually; when compared to all other pupil groupings the amount of individual work was nearly five times higher than the average for individual working (9.6%). Similarly, in 54.5% of instances observed, pupils in low ability sets were asked to sit alone and work alone when this only characterised 6% of observations for all pupil seating, and these pupils were asked to undertake classroom tasks individually in 65.4% of observations while this only characterised 26.6% of the general observations of groups. Pupils in middle ability sets were also assigned higher than average levels of individual work (56.6%), but these pupils were allowed to interact with those sitting nearby (compared to only 10% of the low ability pupils allowed to interact with others). Type of learning task varied between ability groups, with most groups being asked to apply existing knowledge (50.4%), followed by practice (34.2%) and introduction to new knowledge (15.3%). There were no examples of being introduced to new knowledge for the low ability pupils; while in a majority of observations (82.7%) pupils were asked to apply their existing knowledge. High ability and mixed ability pupils undertook most of their learning tasks in the application of existing knowledge (62.0% and 47.1% respectively), and they undertook practice tasks (30.3% and 38.5% respectively) and new knowledge tasks (7.8% and 14.4% respectively). In relation to descriptions of learning tasks described in other organisational groupings (that tended to be dominated by one or two of the learning tasks), pupils in middle ability sets maintained the most balanced range of learning tasks with 36.3% application, 34.2% new knowledge and 29.5% practice/revision tasks. Low ability pupils were most likely to be found working with an adult (96% of these observations, and this adult was most likely to be the class teacher); other ability groups worked with adults, on average, in 70% of the observations.

Second, there was evidence that different teaching and learning strategies were used in relation to group size and other social pedagogic issues in classrooms. Pupils were most often grouped as a whole class (35.9%), as dyads (22.5%), as small groups of four to six pupils (20.0%), as individuals (9.6%) and as triads (8.2%). On the whole, there was no relationship between placement in a group and planned social interaction to support classroom work. Analysis showed that all group sizes, except for whole class, were asked to undertake their work predominantly as individuals. Even though 48.9% of observations showed that pupils were asked to work on individual tasks, only 6% of these pupils were seated individually. Most
pupils experienced seating around a table – no matter whether they were asked to work individually or in small or large groups.

Summary
The reluctance by teachers to engage more in the use of group work as a pedagogic tool may be easily explained. Given the concerns of teachers to meet targets and to complete very full teaching syllabi, it was perhaps not surprising that they adopted a ‘safety first’ attitude to their teaching. Getting the basics understood, keeping order and including as many pupils in the teaching process were seen as paramount concerns. The opportunity to indulge in group work was seen as a useful device by some subjects (such as drama, English), as a necessity because of resources by others (ICT and some science classes), and sometimes as a hindrance by others (mathematics). No clear picture emerged with regard to strategies teachers might best employ with different groups of pupils across the curriculum, although actions observed and spoken about (by teachers) were rarely informed by the pedagogic advantages of group working. The data from the observation of mixed-ability groups of pupils generated its own issues, issues that relate to the extra skill, time and support required of the teacher to work effectively with large groups of mixed-ability pupils.

4.6 Theme D: Relationships Between Learning Task and Pupil Grouping Choices

Much of the evidence and discussion from theme C also applies here. Whilst several teachers agreed that some group work was beneficial in terms of its pedagogical potential, most also said that groupings in the classroom tended to be based upon physical space and resources or for the purposes of behaviour management, rather than being specifically task related (for example As1, Bs1, Cs1, Cs3).

“One teacher puts her classes in groups but in my classroom because I have quite big sets it’s quite tight. I’ve tried arranging the desks other ways but it doesn’t really work” (mathematics teacher).

More generally, classroom observations suggested that pupils were taught as whole classes or worked individually even though they might be sat at tables with other pupils.

“In our Maths we usually do it separate…we don’t usually talk to each other. Most people ask her [the teacher’s] help, they don’t usually talk to other people…they usually just get on with it” (Year 8 pupil).

Shouting of instructions across the classroom was observed in a number of classrooms rather than specific feedback or guidance being given to specific groups of pupils.

Mapping data
In social pedagogical terms, the type of learning task in which pupils were asked to engage may be promoted or inhibited by the size of group within which they worked and were seated. Most ‘new knowledge’ tasks in the case schools were undertaken in large/whole class groups with teachers directing the learning activities (48.6% of new knowledge tasks were undertaken in these large groups; demonstrating teacher dominance of knowledge and creating questionable conditions for two-way communication). ‘Application of existing knowledge’ tasks were likely
to be undertaken individually (61.9%), followed by some small group (22.1%) and whole class (14.4%) interaction (understanding of these tasks could be enhanced by discussion between child, peers and teachers, but this only happened in a minority of observations). ‘Practice’ tasks, best supported in individual contexts, were most likely to be undertaken by whole class (41.3%), although individuals also undertook this type of task (37.9%) as did small groups (20.8%).

Other social pedagogic concerns included: (i) except for whole class and individuals working alone, most groups in co-educational schools were single sex, which could prevent broader (and beneficial) inter-sex socialisation processes taking place; (ii) large groups were most likely to be found working with a teacher while other group sizes had to work autonomously from the teacher (accounting for approximately 40% of pupils’ time in the classroom, pupils ‘worked’ without any appropriate pedagogical scaffolding being present to support these groups); (iii) small groups were dominated by friendship (logically, large groups had to mix friends and non-friends, but the friendship domination in small groups may be seen to reinforce stereotypical gender and ability differentiated behaviours), and (iv) low ability pupils were most often expected to work as individuals (65.4% of their seating and 78.2% of their observed interactions), while 50.5% of middle ability pupils were grouped as whole class and high ability/mixed ability pupils were equally likely to be grouped as whole class, small groups or dyads. Some general social pedagogic points may be drawn from these points:

- The learning and general classroom experiences of pupils categorised as low ability differed from all other types of categories; they had less opportunity to interact with peers, were least likely to be asked to undertake ‘new knowledge’ learning tasks and were most likely to work with an adult in the classroom and not with their peers.
- Both seating assignment and group size may interfere with patterns of communication and type of assigned learning task. Pupils were often found in groups too large to effectively communicate with teacher or peers or placed in a social context when they needed to focus on individual tasks.
- The social experience offered by whole class and small group teaching appeared to be very different, and teaching may not cater for this difference in group size. For example, large groups/whole class were likely to involve a mix of ability, sexes, ethnicity and friends/non-friends. Small groups and dyads tended to be characterised by friendship, same sex and similar ability partners. Pupils will need to interact in quite different ways in these two grouping contexts.

**Summary**

There is much rhetoric regarding the value of group work for particular types of task (Kutnick et al., 2005b), and much of this rhetoric was known and restated by the teachers in this study. However, the overwhelming evidence from the interviews and the observations of classroom practice suggests that grouping strategies were more organisational than task-related. Further, in the majority of cases observed, it was not the task or learning objective that dictated the within-class grouping arrangements or the presence of a general departmental policy regarding strategies for grouping pupils. Grouping arrangements appeared, in the main, to be based on the individual choices of the teachers concerned; sometimes by habit, often by necessity when reacting to the immediate circumstances of a particular lesson.

**4.7 Theme E: Pupil Grouping Strategies in Different Subjects**

In terms of general organisational practices for each subject, the data from classroom mappings and observations provided potential confirmation for the inferences drawn from the interviews.
conducted with staff and pupils. For example, it was commonly accepted by managers, teachers and pupils that mathematics (and to a lesser extent English) was set by ability, and this was often a reflection of how mathematics was perceived as a subject. Managers and teachers saw few alternatives to setting as the predominant organisational grouping for mathematics.

“We would like Mathematics to join in and be mixed ability but we have to listen to the specialists so we’ve compromised with broad ability bands” (Assistant Head teacher).

“...I’m slightly envious of the other subjects they do. Now whether that’s because, as a teacher, I’m unable to come up with a solution or whether it’s because it [mathematics] is a more individualised way of learning…”(mathematics teacher)

For science, there was less emphasis on setting as an organisational device, although some teachers expressed a view that science teaching benefited from setting in similar ways to mathematics and English (see for example As1); teachers believed that all pupils benefited from setting because they were taught according to their needs ‘at the right level’. Other teachers thought the science learning might benefit from the experiences gained in a mixed ability class grouping (As2; where one teacher stated that ‘mixed-ability teaching suited subjects where you experience things’, noting especially science and physical education). The other subject areas tended to use grouping strategies that reflected more the practicalities of teaching and learning for relatively large classes of pupils. So, for example, in history, geography and ICT, grouping related to the sharing of materials (for reading and research) and computer equipment (for example Bs2, Cs3). In subject areas such as drama, group work was positively endorsed (for example As1, As3, Bs2) as a means of sharing the experiences of reading text or role-play.

Mapping data
With particular focus on the working practices within classrooms by curriculum area, mapping showed that the three predominant ‘working’ groups of pupils were whole class (35%), dyads (23%) and small groups (of four to six pupils, 21%). Pupils worked individually in 10% of the observations. With regard to curriculum subjects, classroom working groups analysis showed: PE, MFL and English were predominantly whole class (over 50% of observations); ICT and DT were predominantly taught individually (over 40% of observations); and pupils were grouped as dyads in over 25% of observations in mathematics, English, science and humanities subjects. While all curriculum subjects used a range of pupil group sizes for classroom work, the above differences showed that diverse subjects maintained fairly distinctive working practices (which will be considered further in relation to social pedagogy).

It has already been noted that the subjects most likely to teach pupil in sets (as opposed to mixed ability) were mathematics (76.5%), English (47.1%) and ICT (37.7%), and setting was more characteristic of Year 9 than Year 7. The following analysis will focus mainly on the core curriculum subjects (mathematics, English and science) as well as humanities subjects. Table 4c combines mapped results for these subjects with regard to organisational grouping, classroom seating (to undertake learning tasks), and interactions to support learning tasks. While these analyses are reported upon separately below, the table allows readers to make social pedagogic comparisons across these curriculum subjects.
Table 4c: Percentage (by row) comparisons of core subjects by organisational grouping, seating during learning tasks and interactions to support learning tasks (based on observations of case classrooms)

<table>
<thead>
<tr>
<th>Curriculum subjects</th>
<th>Organisational grouping</th>
<th>Seating for learning tasks</th>
<th>Interaction for learning tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Observations in set classes %</td>
<td>Observations in mixed ability classes %</td>
<td>Individual %</td>
</tr>
<tr>
<td>Mathematics</td>
<td>76.5</td>
<td>14.4</td>
<td>18.5</td>
</tr>
<tr>
<td>English</td>
<td>33.1</td>
<td>59.1</td>
<td>36.3</td>
</tr>
<tr>
<td>Science</td>
<td>21.1</td>
<td>78.9</td>
<td>4.1</td>
</tr>
<tr>
<td>Humanities</td>
<td>7.7</td>
<td>92.3</td>
<td>45.9</td>
</tr>
<tr>
<td>TOTALS</td>
<td>30.9</td>
<td>60.5</td>
<td>26.3</td>
</tr>
</tbody>
</table>

1 For analyses undertaken in this column, the one streamed school is excluded.

Analysis of each main column by subject allows the following points to be made:

- Mathematics was the subject most likely to be set, although a significant amount of setting was also found in English and, to a lesser extent, science.
- Mixed ability classes were most likely to be found in humanities and science, and rarely found in mathematics.
- Mathematics was the subject most likely to be taught while pupils were seated as a whole class (in two-thirds of the observations made), and English was least likely to be seated as a whole class.
- The predominant seating arrangement for English and science was the small group (of four to six pupils).
- Humanities had a very high proportion of individual seating for learning.

Pupil interaction with peers and teachers contrasted with seating arrangements for a number of the core subjects.

- While mathematics and science focused their learning tasks on the individual pupil, pupils were rarely seated as individuals; there was a higher level of coordination between individual tasks and seating found in humanities.
- There were comparatively low levels of small group interaction assigned to pupils in the core subjects; again humanities were an exception.
- While approximately half of the learning task interactions in English took place as a whole class, pupils were most likely to undertake these tasks while seated individually or as a small group.
- Although there were no instances of whole class interactions observed in humanities classes, pupils sat as a whole class group for more than one-third of their seated time.

Overall, there was little evidence (by observation) of the coordination of pupil seating and the interactions assigned to support their learning tasks.

In these core subjects, type of learning task observed found application of existing knowledge most frequent in humanities (67.9% of observations within subject), followed by science.
(60.6%), English (47.7%) and mathematics (37.4%). New knowledge was most frequent in English (25.6% of observations within subject), followed by mathematics (23.2%) and science (6.5%). Practice and revision were most frequent in mathematics (39.4% of observations within subject), followed by science (32.9%), humanities (32.1%) and English (26.7%). Overall, combining information displayed in Table 4c and the analysis of learning tasks, the core and humanities subjects provided different learning contexts for their pupils. Pupils in mathematics were most likely to be found in sets and learning as a whole class, but their tasks were individually oriented and predominantly practice or application oriented. Only about half of the English classes were set, and pupils undertook a range of learning tasks in a variety of seating/interacting positions. The majority of science lessons observed organised pupils by mixed ability (78.9% of observations), and during these lessons, pupils tended to be seated as a whole class while they pursued individual application and practice tasks.

**Summary**

The evidence from the case study interviews, the classroom mappings and observations supported the notion that pupil grouping strategies at a school level often reflected relatively abstract impressions of whether and how group work might improve teaching and learning in different subjects (for example, Galton et al., 1999). Mathematics was clearly singled out by both teachers and Head/Assistant Head teachers as a subject that benefited from setting by ability. At the same time, as was evident from a number of comments made by teachers, the possibility of pupils being held back in mixed ability classes or the ease of setting up teaching and learning in ability-based groupings and pitching at the right level seemed to be more dominant in their minds when asked to reflect on how they used pupil grouping. They said very little, however, about the value of group work in mathematics classes. In fact, on the whole teachers were not able to clearly explain why group work might be beneficial for their own particular subject. Teachers’ did not consider the pedagogic value of pupil grouping in the classroom; rather, they viewed pupil grouping simply as a means of enhancing performance at a school level.

**4.8 Theme F: Continuities of Pupil Grouping Strategies at Key Stage Transition**

The data collected from the interviews suggested a binary pattern of provision and transfer/transition initiatives. Some schools had extensive programmes for the transfer and transition of pupils between Key Stage 2 and 3, which encompassed visits from and to the feeder primary schools, exchange teaching, social events, special attention to how Year 7 form groups were composed, and identifying those pupils at potential risk during the move from primary to secondary school (see Appendix F). In particular, As1, Cs1, and to a lesser extent Ds1 and Cs2 identified detailed transfer/transition programmes for new Year 7 pupils. For other schools, whilst transfer and transition was seen as an important time, and there was an awareness of the potential issues (particularly with regard to familiarity of and places within the school) involved, and no particular policy was in place to support these issues (As2, Bs1, Bs2, Bs3, Cs3 for example).

“In September, Year 6 come in one school at a time. They have one lesson and a talk but are taken back before lunch. Then I visit the nine basic feeders and then another teacher and I cover the other 20. I go just to give them a face to recognise. For induction day in
July they get three lessons, break and lunch. We get all the NQTs in for that day…” (transfer manager)

“They get a week to settle in. They don’t get a map of the site, it’s too complex. We prefer Year 9s to go with them. We don’t have a buddy system after that because we don’t think they lack confidence (laughs). In fact some of them have too much…There are few disaffected kids here so everyone is pretty friendly” (form tutor).

However, there was evidence in some schools that communication between primary and secondary schools was lacking, especially in terms of the basic understanding teachers had in the partner schools about their counterpart’s policies and practices. Thus in the case of Cp3, which had the vast majority of its pupils moving to Cs2 during the KS2-KS3 transition, there was an obvious discontinuity between the set classes of the primary school, and the mixed-ability classes which were found at the secondary school.

But, at the same time, many Year 7 pupils suggested that they had few problems settling into their new ‘secondary’ life. Despite the changes that occurred after transfer, many pupils still had friends in their classes. The fact that they must change classrooms and teachers for different subjects etc. was evidence of pupils being relatively robust about entering a new phase in their educational careers. These findings are consistent with a recent study by Galton, Gray and Rudduck (2003) which suggested that schools should start to focus more upon maintaining a continuity of academic achievement between the two phases rather than the social relational aspects of such transitions. Their recommendation that schools review academic, social and curricular aspects of transition was clearly undertaken in some of the case schools, but greater efforts to facilitate transition could be undertaken in the remaining case schools.

Summary
The evidence suggested that, by and large, the transfer and transition programmes the schools had in place provided for social integration of pupils into KS3. There was an implicit assumption made within interviews that these initiatives, because they supported the social integration and development of the pupils entering Year 7, would also ensure that their academic performance continued to develop, although there was little evidence to support this assumption. It is interesting to note that such socialisation as did take place during this transition phase was not really developed in any meaningful way in terms of promoting the cooperative interaction of pupils in classroom sessions in many of the schools observed. There was little or no connection made by the schools between the way in which pupils might be grouped together and work together in those groups, and the way in which they grouped their pupils to consolidate social ties and promote stability during transition (see Galton et al., 2003).

4.9 Theme G: Group Work Training for Teachers and Pupils

Both the degree of awareness and group work training staff in the secondary schools had experienced varied considerably. A few teachers had direct experience of group work training (Cs2) as part of the ESRC/TLRP SPRInG Group work research project (see Blatchford et al., 2005). Other teachers encountered group work and group working guidance through general and AfL INSET days (As1, As2). Some teachers thought that they ‘picked it up’ as they went along (As1), or simply had not experienced any professional development activities specifically
focused on group work (Bs1, Bs2, Cs1). The distinction between specific training to enhance the potential of classroom-based group work and a more laissez faire approach was rarely realised by teachers or school managers.

Interviews considered the role and development of group work with teachers and managers. The overwhelming responses noted that training, especially for pupils to engage in effective group work, was not necessary. Reasons for holding this view related to the notion that pupils should ‘naturally’ have these skills or that group work was an unnecessary burden in classes and there was no reason to use it.

‘Teachers do a lot of peer assessment without realising …..no specific training for pupils in group work was given as they were…skills they picked up as they went along” (Assistant Head teacher).

“…at Key Stage 4 there is such a heavy content and group work is slower so people have tended to use the individual approach just to get through the content” (history teacher).

“I struggle to find ways to get them working successfully in groups that will help each other develop their learning” (mathematics teacher).

Where grouping strategies and group work skills were discussed, this was often at an informal level and the appropriate group working skills were seen as being ones developed in a very tacit way rather through explicit training programmes.

“My training tended to revolve around teaching much more mixed ability classes…I remember doing a lot of group work and project work activities. The whole lot has now become more sharp... learning objectives, Curriculum 2000, and the Literacy framework, these have sharpened our practices, we teach much better now…” (Assistant Head teacher).

“I always model what effective group work is in my lessons….I also let them fall into their own roles, because you can’t say you do that and you do that” (Deputy Head teacher).

By contrast, pupils had a range of views about group working.

“We do nearly all group work, which is good” (Year 8 pupil)

But the quote above did not define why or how group work was undertaken, and without consideration regarding training to engage effectively in groups and appropriate group working tasks, classroom-based group work was not always successful:

“Some people sit there and do nothing while the other people do all the work” (Year 8 pupil).
It seemed that, without exception, all the interviews in the schools stated that no specific group work training was available for pupils\textsuperscript{20}. At the same time, there was an expectation that the pupils would develop these skills (which of course many do) during their time at school. However, there was no recognition by teachers that pupils were constantly placed in teaching and learning contexts where generic group working skills would be of value; it appeared that these skills would be developed by trial and error.

**Summary**

It was difficult to assess both the general level of awareness and experience of group work from the small sample of schools. Nevertheless, it was striking that so little formal training was available, or importantly, was seen as being useful or worth pursuing by teachers and school Heads. Most of the discussion regarding groups and grouping remained at an informal level such as conversations in the staffroom rather than discussions at a strategic level.

**4.10 Theme H: Pupil Grouping and Achievement**

Much of what was reported under Theme A of this chapter also applies to Theme H. Invariably, grouping strategies to raise achievement revolved around setting in the core subjects. In addition, pupils with SEN were either placed in specific form groups so that they could be taught together or removed from existing mixed ability forms and given additional support. In a small number of mixed ability classes, there was an effort to integrate pupils with SEN with other ability pupils. Other suggestions to raise achievement included the well known arguments of reducing the class size (Cs3), getting the right mix of pupils in a form group (As2) and implementing specific initiatives for low attainers (Ds3). The evidence suggested that these strategies cannot be directly related to raising achievement levels.

Table 4a provided a general description of the case schools and their grouping strategies in relation to academic attainment at level 5 or above at KS3 in the core curriculum subjects (mathematics, English and science) compared to general results for the local authority and nationally (for maintained schools), KS2 to KS3 value-added scores, proportion of grouping practice for classes observed within each school and any innovatory practice that identified the school. Focusing on mathematics results for mixed ability, set and streamed classes for Year 7, there were different results for different types of organisational groupings, with pupils in the streamed school having lower performance than any of the other types of organisational grouping and little difference in performance between schools that used mixed ability and set organisational grouping\textsuperscript{21}. Our data confirms previous studies and reviews of the literature that suggested no significant advantage is gained from setting in mathematics in terms of

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\textsuperscript{20} SPRinG trained teachers in Cs2 were not involved in these interviews. This lead to the realisation that SPRinG training was limited to only a few teachers/subject areas in the school and this approach was not adopted at a whole school level.

\textsuperscript{21} An analysis of variance (ANOVA) was performed on KS3 mathematics results, contrasting organizational grouping by Level 5 results. The ANOVA was significant (F2,229 = 152.08, p<0.001, eta = 0.76), with 82\% mixed ability groups scoring at Level 5 and above, followed by 81.8\% of set groups and 58.0\% of streamed groups. The main distinction in the different organisational groupings (that the streamed school performed more poorly than the other groupings) was confirmed by conducting a Scheffe (1953) post-hoc analysis, a multiple comparison statistical procedure used to determine where differences between groups exist after a significant F ratio has been obtained in a one-way ANOVA.
achievement. No assessment could be made for Year 9, as there were no mixed-ability classes observed at this age level. From Table 4a, a few key points arose:

- There was no innovative practice that could be consistently associated with higher levels of attainment or value-added results.
- The impact of organisational grouping on achievement in the case schools, especially in the core curriculum subjects, shows no clear relationship with local or national performance indicators.
- No ability grouping practice was associated with higher levels of core curriculum results or value-added results; note especially that the highest levels of national value added were gained by the extremes of ability grouping, either fully mixed ability (+2.4) or fully set (+2.6). On the other hand, analysis of results by organisational grouping indicated some potential achievement advantages in mathematics for mixed ability groups when pupils began their secondary schooling.

Summary
It would be simplistic to suggest that mixed ability did not work in the context of within class grouping, or as a wider organisational strategy, but there was no doubt that many issues remained about how best teachers might be supported when teaching mixed-ability groups. The impact of setting as a grouping strategy was clearer. One might for example pose the question 'what is the real impact of current school level grouping strategies on raising achievement?' The expectation that grouping practices such as setting, which were designed to raise achievement, were effective because they targeted particular groups of pupils with differentiated teaching and learning was not supported by the evidence obtained from this current study. But, schools that adopted a predominantly mixed ability organisational approach performed equally as well as schools using setting. These findings are in line with other studies that specifically considered the relationship between ability grouping (setting) and achievement (for example, Ireson, Hallam, Hack, Clark & Plewis, 2002).

4.11 Summary Points and Policy Implications Arising from the Key Stage 3 Research
The following key points arise from this chapter regarding the strategic and operational use of group work in the Key Stage 3 classroom.

- Rhetoric rather than reviews of their own practice governed the decisions regarding mixed ability or set classes. This has implications for future policy regarding the content of both Initial Teacher Education (ITE) and CPD led initiatives on class/subject organisation.
- This rhetoric concerning organisational grouping was common across pupils, teachers and heads in secondary schools.
- A tension existed in school-based practice decisions between the use of mixed ability versus setting and the benefits of inclusion versus differentiation.
- Potential problems for both teachers and pupils were found in set classes, especially with regard to: (i) large, mid-ability classes where the range of abilities was prohibitive in pedagogical terms, and (ii) the limitations of low ability classes (in terms of seating arrangements, learning task, interaction; and behaviour).
- Group composition within coeducational schools might actually inhibit learning, as the grouping practices tended not to be related to pedagogy, but were dominated by
furniture, resources and preferred friendship seating. There was also a mismatch between seating and interaction (and learning task).

- Teachers and pupils had little training for effective group work (except drama and SPRinG).
- Pupils spent much of their classroom time working in groups where the teacher was not working with the group, but little pedagogic consideration was given in support of this autonomous learning.
- It was evident in the observations that teachers dominated new knowledge tasks, which effectively excluded pupil contributions.
- There was uneven planning for transfer, and a disparity was evident in planning strategies between curriculum and social concerns.
Chapter 5: Rethinking Pupil Grouping Strategies

This research began from no fixed position on the ability-grouping debate but acknowledged that the debate was fuelled by ideology as much as by any robust evidence. From the literature review in the first phase of the project (Kutnick et al., 2005b), it emerged that schools use a much wider range of grouping strategies than the polarised positions reflected in the earlier debate. Factors such as age of the pupils and curricular area, departmental and school policy are likely to influence which grouping strategies are adopted. Overall, the literature review suggested that attempts to narrow the achievement gap through setting appear to have replicated the achievement spectrum that they were designed to reduce. In contrast, within-class ability grouping, which can take many forms, seemed to have the potential to raise standards through personalising the learning experience.

The case studies were able to interrogate the range of grouping strategies further, by relating the research questions to actual practice in primary and secondary schools. This chapter considers each of the research questions in the light of the evidence from both the literature and the case studies. It then sets out some main conclusions, implications for policy and practice and possible areas for future research.

5.1 Which types of pupil grouping positively impact on the attainment of pupils?
The relationship between ability grouping and attainment was noted from the literature review to be inconclusive. The case studies confirmed this, in so far as no linear relationship in secondary or primary schools was found between setting and attainment or value-added measures. However, in the secondary schools, the perceptions of staff, in particular senior managers, and even some pupils, suggested that setting was seen as more likely to stretch the high ability students and enabled support for behaviour and learning problems to be more efficiently targeted. In most interviews with teachers and senior managers in secondary schools, raising achievement was identified as the key rationale for implementing a setting strategy. One of the main reasons given for setting was that it was possible to tailor particular work to the different ability groups and for all the groups concerned to make positive gains in terms of their understanding and achievement. Yet, there was little evidence from the research literature or the case studies to support this assertion.

In secondary schools that adopted mixed ability or part mixed ability grouping approaches, the rationale given by teachers and senior managers tended not to make reference to attainment. Instead, it focused on the benefits realised by greater social awareness and inclusivity. However, it is important to note that setting was not necessarily viewed as being in contradiction to inclusivity. Pupils generally supported the organisational strategy for grouping adopted by their school/department, and many were critically concerned about the classmates that they engaged with while learning. Some pupils in the case studies suggested that whilst it was often good to be seated with friends in their form groups, in some subjects, for example mathematics, it was easier to learn if they worked with other pupils of similar ability.

In the primary case study schools, ability grouping in mathematics and English was seen as enabling pupils to work at an appropriate pace. Setting in these subjects allowed smaller groupings for pupils identified as lower ability and lessened the need to group by ability within lessons. Some pupils regarded ability grouping in these subjects as negative as it involved them...
moving away from their friends while others viewed the opportunities to mix with different pupils and experience other teachers as positive. Unlike the secondary schools, the staff in primary schools did not see mixed ability grouping policy as arising from a commitment to inclusion. Within mixed ability classes, pupils were often seated around tables on the basis of ability which, as discussed further below, had implications for the type of tasks they were given.

5.2 Which types of pupil grouping are best suited to particular groups of pupils?
From both the primary and secondary school case studies, the findings relating to gender and special educational needs were more extensive than those relating to ethnicity. In the secondary school case studies in which setting was prevalent, higher ability pupil groups tended to work for more of the time in smaller groups and lower ability pupil groups tended to receive a much larger amount of whole class teaching. Pupils with special educational needs were often grouped together in lower sets or within mixed ability groups and sometimes withdrawn for specific sessions. These practices seemed to have consequences for behaviour and disruption, which other pupils frequently commented upon, for example suggesting that disruptive pupils in these groupings made it difficult for other pupils to learn. Where disadvantages regarding mixed ability groupings emerged (from observations and in interviews), these often reflected concerns that more support (for learning) was required within classrooms.

In relation to gender in secondary schools, single-sex teaching for part of the time (often in selected subjects) seemed to be beneficial in terms of focused attention in classrooms, but accentuated teachers’ perceptions of gendered behaviours of boys and girls. There was evidence from the interviews with both teachers and pupils that gender was used as a basis for seating arrangements and as a mechanism of control and social engineering. References were made to alternating boys and girls in order to reduce behavioural difficulties, to pairing boys and girls and to small groups designed to reduce the challenging behaviour through mixing the boys and girls. These seating arrangements were viewed positively by some teachers in terms of the mediating effects, in particular on behaviour, but negatively by others in terms of the distractions to both boys and girls. In primary schools, the use of mixed gender seating arrangements in within class grouping was justified by teachers and senior managers in terms of achieving an inclusive ‘balance’.

5.3 Are there examples of timetabling and classroom organisation that accompany a particular type of pupil grouping, in particular to meet the pupils who are working below or well above the national average?
At a more general level, in secondary schools, pupils in mixed ability classes worked for similar proportions of time in whole class, small group and dyads. Pupils in high ability sets were slightly more likely to work in whole class, followed by dyads and least likely to be in small groups, though this still made up nearly one fifth of the time. Middle ability sets worked predominantly as a whole class followed by dyads. Low ability sets worked predominantly as individuals followed by whole class. Thus, the classroom organisation and working experience of low ability sets was distinctly different from other sets and mixed ability groups; in particular, those low ability pupils observed were rarely offered the opportunity to interact with peers in dyads or small groups, limiting their opportunities for social development.
Pupils in secondary schools reported a preference for paired work but were more likely to be working individually within whole class teaching activities.

In primary schools, the most frequently found group size was the small group, followed by whole class and dyads, with smaller proportions of triads, individual and larger groups. While paired seating at tables was common, the tasks tended to be individualised. Similarly, in primary schools, the most frequently found group size was the small group, followed by whole class and dyads, with smaller proportions of triads, individual and larger groups. While paired seating at tables was common, the tasks tended to be individualised.

5.4 Which subjects are best suited to a particular type of grouping? What is the impact on learning of the use of grouping within subjects?

As noted above, no clear or consistent point can be made regarding organisational use of grouping and local or national achievement. One of the main reasons for setting given was that it was possible to tailor particular work to the different ability groups and for all the groups concerned to make positive gains in terms of their understanding and achievement. However, neither the literature review nor the data from the case studies supported this rationale.

In the secondary case study schools, most of the groups observed in mathematics were set, and half the English lessons observed were set. Lower levels of setting were found in ICT, science and MFL. Little or no setting was found in the humanities, PE, music, art, drama or DT lessons observed.

Setting in science and English classes was claimed to provide better differentiation. However, whilst such an approach had a clear logic in terms of accelerating the understanding of higher achieving pupils and providing the opportunity to focus support and guidance for the lower achieving pupils, there remained a large and very diverse middle ‘group’ of pupils in these core subjects, for whom the justifications given for ability grouping remained unclear.

In the primary case study schools, mathematics and English were the only subjects set in a number of the classes (between one-third and one-half of observations made in these schools/subjects). Mathematics and English mainly used the small group for working in the classroom (in one third of observations made), followed by whole class and dyads. Science was taught predominantly as whole class (in half the observations made) or small group and humanities was taught predominantly as dyad (in two-thirds of observations made) or whole class. In the primary schools, table-based small groups were the preferred arrangement across all subject areas.

There was no clear evidence as to particular subjects being ‘best’ suited to particular pupil groupings. As identified previously, pupils were mainly seated around tables, but not asked to work collaboratively with partners. Even when some collaborative working was identified (by teachers), many children did not have (and were not offered) the skills that would enhance their work in groups.
5.5 Are there teaching and learning strategies that are best suited to particular types of pupil grouping?

In secondary schools, a majority of pupil grouping experience (in over half of the observed lessons) took place in mixed ability classes and approximately a third in set classes. There were a number of differences with regard to type of learning task undertaken: (i) children in set classes were more likely to undertake ‘application of existing knowledge tasks’, and (ii) pupils in mixed ability classes were more likely to undertake ‘new knowledge’ and ‘practice’ tasks. These differences in orientation to learning task by organisational grouping may indicate that set classes were more focused in using their current knowledge while mixed ability classes drew upon a greater range of learning tasks.

In the primary school case studies, children largely sat around tables in small groups, but tended to be assigned individual work. Very little group or collaborative work was observed in these classrooms. Issues relating to self-control, behaviour and expectations of completing closed tasks militated against the effective use of group work. A substantial proportion of pupils in primary schools worked with no adult direction or observation. This lack of adult presence suggests that a sizeable part of pupils’ working days must be either self-directed or pre-planned by their teachers. Teachers expressed concern that learning tasks needed to be appropriate for their pupils, but ‘appropriate’ did not include consideration of the social context or autonomous learning within which the learning task took place.

Hence in both primary and secondary schools, the case studies reinforced the findings that emerged from the literature review concerning the relationship between grouping (both organisational and within-class), seating and learning task. They also confirmed the lack of collaborative learning opportunities in both primary and secondary schools. Whilst the benefits of group work were expounded, there was little evidence of it being given high priority in the lessons observed or in the comments given in interviews with pupils or staff. The staff interviewed were cautious of group work, regarding it as a threat to classroom control. This caution was likely to reinforce a lack of personal responsibility amongst pupils for their own learning. The evidence from the case studies suggested that the teacher’s identity as ‘authority’ and ‘giver of knowledge’ and the pupil’s identity as ‘recipient of knowledge’ may become polarised through this lack of opportunity to develop pupil responsibility.

5.6 How is the use of pupil grouping employed to improve transfer and transition between schools and key stages, particularly primary to secondary?

Grouping of pupils in relation to transfer was not referred to with any frequency. Most of the teachers and pupils interviewed referred to general social considerations and behaviour when describing the transfer arrangements from primary to secondary schools. On the other hand, there were some feeder primary and their secondary schools that had developed very extensive interactions and programmes for pupil introduction to secondary schools. Where well planned transfer arrangements occurred that included pupil grouping, pupils were aware of the basis of the groups. There was little evidence about the impact of grouping during transfer and transition on subsequent learning.
5.7 Training
Teachers seemed aware that effective grouping practices in classrooms required training and application of specific skills by children and supportive practices by teachers. In practice, though, this group work training was not included in their planned work. In general, teachers reported that the constraints on time and the fullness of the curriculum meant there was no time to teach group work skills. A few teachers stated that they were able to plan for the time to help pupils develop their group working skills but this was not seen as a legitimate aspect of the curriculum. There was little recognition that group work required active preparation and training and references were made to ‘picking it up as they go along’. Furthermore, there was little grasp of the relationship between task, type of interaction intended, seating arrangements and social context.

In the case study schools that had been involved in the SPRinG project, in which training in group work skills had been targeted, the observational and interview data suggested that pupils were better able to work undirected.

In terms of staff development for teachers, a few references were made by staff to development within the KS3 training, but in general, there was limited evidence of any coherent knowledge of group work theory or practice and only vague recollections to this being addressed in any in-service education.

5.8 Implications for Policy and Practice
The literature review and case studies undertaken suggested that no direct relationship could be demonstrated between any one form of organisational grouping and learning outcomes at secondary school level. In the primary school case studies, setting was associated with lower levels of performance in mathematics and English (the only subjects set in Year 6, see Table 3a in Chapter 3). The ambiguity of the role of setting (especially) is likely to reflect the greater relative importance of other factors such as teacher effectiveness, teaching and learning strategies adopted and pupils’ prior learning (generally what are considered as ‘within-class’ strategies). However, there is some evidence, in particular from the case study schools previously involved in the SPRinG project (that enable pupil participation through group working, communication skills, etc.), that effective within-class grouping may be linked to positive outcomes.

The evidence from the case studies suggests that flexible use of within-class grouping may be a useful approach to enhance positive outcomes of organisational grouping where these occur. The rhetoric that simply promoting one form of organisational grouping will benefit school-based achievement needs to be debated. Whatever form of grouping is adopted, ongoing monitoring and evaluation of its effects will enable schools to respond to the outcomes – both positive and negative.22.

22 It should be noted that recent research and policy concerns regarding low levels of achievement and demotivation of pupils taught with a tracked (set) context in a range of subjects in the United States has led a number of schools to ‘detrack’ subjects such as mathematics. Detracking has been found to be most effective in schools/classes/subjects that use a mixed ability organisational approach that coincides with greater encouragement of pupil participation and inclusion (at the classroom level). See studies by Boaler (2006), Yonezawa (2006), Crone (2006), and Hyland (2006).
The Primary National Strategy and the Secondary National Strategy explicitly address within-class group work. These strategies include specific units on promoting group work skills (e.g. ‘Pedagogy and Practice: Teaching and Learning in Secondary Schools’ Unit 10 on Group Work - DfES 0433-2004 G), others on promoting group talk (e.g. ‘The management of group talk’ in ‘Literacy Across the Curriculum’ - Unit 7 on Group Talk - DfEE 0235-2001) and subject-specific training material (e.g. Science: Using group talk and argument - DfES 069-2004).

Despite this, the evidence of the use of effective group work across the 24 case study schools was relatively limited. Explanations for the lack of group work (as well as aspects of personalised learning) use may be attributed to a relative absence of these considerations in initial teacher education courses and in-service courses.

The evidence in this report supports the greater use of group work within classrooms; this will need to be promoted through both initial teacher education and continuing professional development. Within continuing professional development, there are indications that specific schools and local authorities have taken the initiative to support enhanced training in this area (see for example, specific schools currently undertaking the Working with Others training23 and training in ‘dialogic’ teaching24). Some of the training and support for effective group work and participative classroom interaction is fairly recent. This training and support is often aimed at specific teachers with responsibilities within the strategies and may receive limited attention, especially once cascaded through the system. These approaches which enhance pupil participation and inclusivity are likely to complement research and recommendations concerning ‘formative assessment’ (Black and Wiliam, 1998) and ‘pupil voice’ (Rudduck and Flutter, 2003).

Findings from the case studies may challenge the perception that specific types of pupil groups may be easily integrated into classroom practice. Some of the findings from the case studies suggest that specific support can be effectively provided through whole class inclusion with integrated support rather than through withdrawing groups of pupils. Further, there is a suggestion within the literature and case studies that problems of indiscipline within schooling may be mediated by more intensive and democratic classroom participation encouraged in more effective group work amongst pupils.

However, other findings to emerge from this study suggest the need to reconsider the priorities and wider context in schools in which group work is expected to take place. Time constraints were often given as an inhibiting factor. Yet if within-class grouping is used for only part of the lesson and is seen as a means of covering part of the curriculum rather than as a separate activity, it might be viewed more positively. This suggests greater emphasis in staff development beyond the group work skills per se and on to the contextual issues surrounding the use of group work.

A further constraint mentioned frequently by teachers is the threat that use of group work is seen to pose to classroom control. The seating and grouping arrangements in the case study schools were more often justified in terms of classroom behaviour than in relation to learning outcomes. Greater attention is needed as to how to build up group work skills from that requiring minimum demands (e.g. two minutes of paired work on a very tightly defined task) progressing to more

23 More information on Working with Others and its basis in the SPRinG programme can be found at: www.workingwithothers.org

24 More information on dialogic teaching, see reference to Alexander (2004).
sophisticated small group work. Furthermore, neither teachers nor pupils should feel pressured to adopt these practices for extended periods or in every lesson.

The findings from this study suggest that there are no clear patterns with respect to grouping on the basis of gender, ethnicity or special educational needs. However, flexible approaches to within-class grouping emerged from the literature review as leading to greater acceptance amongst pupils that they sometimes work in same sex groups, at other times in ability groups and for those in need of learning or language support, specific teaching in separate groups for short periods. Most importantly, ensuring pupils can feed back on how these arrangements work might assist in achieving greater levels of learning.

An area which has received little attention but emerged as potentially important in this study is the relationship between type of grouping (dyad, triad, small group etc), task and expected interaction. The literature review and case study data suggest a potential social pedagogic mismatch between type of grouping, demands of task and seating arrangements. Further attention needs to be given as to how teachers can be supported in ensuring that the grouping and seating support the demands of the task set. Furthermore, all pupils will be likely to need a balance of application of existing knowledge, new knowledge and practice tasks. Given this potential for mismatch, consideration will be vital if pupils are to develop both greater responsibility for their own learning and more effective working with others that supports mutual learning.

Finally, the focus in this section has been on the implications of the findings from the study. These have been highlighted as possible areas for staff development, but training of pupils in the skills needed to work in groups is also crucial. Projects such as SPRinG (Blatchford et al., 2005), and dialogic teaching (Alexander, 2004) have developed foci and materials to support this work, and these might be further developed and incorporated into the National Strategy material. Further consideration may be given as to how these foci may be integrated into initial teacher education courses in which the current priorities may be seen to be in favour of subject/curriculum knowledge rather than social pedagogic practice.

5.9 General Summary Points:

- **Purposes of grouping pupils**: Two forms of pupil grouping were considered: (i) the ‘organisational’ allocation of pupils to differentiate or integrate differences in attainment, and (ii) use of various types of ‘within-class’ groups to enhance pedagogy and control in the classroom. Of the two organisational groups, in the focused sample of 24 case study schools, neither could be associated with higher levels of attainment at Key Stage 2 and 3; although differences in approach to learning tasks and behaviour control appeared to characterise set and mixed ability classes. Also, there was little evidence in the case studies that within-class groups were systematically used to enhance learning and participation of pupils (in either set or mixed ability classes).

- **Inclusion and diversity**: Teachers and school managers did not consider the use of the various types (organisational or within-class) of pupil grouping for inclusion; rather they expressed concern for the individual needs of pupils (with low attainment, having special educational needs, having English as an additional language, etc.). Hence, to meet the
range of diverse learning needs, specialist teachers and teacher support workers were used by some schools within and outside of the classroom. Some pupils and some teachers felt that withdrawal from the classroom was associated with loss of curriculum progress and labelling (of underachievement). On the other hand, classroom inclusion was sometimes associated with complex management issues and teachers reported being ill-prepared to cope with these issues in the classrooms observed. Currently, some low attaining pupils appear to be taught in a manner that did not allow their effective participation with teachers or peers.

- **Pedagogy**: Both the literature review and the case studies considered how the term ‘social pedagogy’ should be considered within the ‘learning’ of the classroom. The social context of informal pupil groups, dominance of teacher presence when ‘new knowledge’ is introduced and lack of movement of classroom furniture all appeared to conspire against effective participation and learning of pupils. Teacher presence (or lack of presence) provided a further contradiction – while teachers are currently required to provide the information identified as new knowledge, the need for teachers to focus on individual pupils and small groups to promote this learning meant that the majority of pupils needed to undertake their classroom work autonomously.

- **Learning tasks**: Case studies showed that teachers rarely drew upon a varied range of grouping or interactional techniques as their learning tasks developed and changed over the course of a lesson. Also, the lowest attaining pupils were offered the most limited range of grouping/interaction techniques.

- **Curriculum subject**: Aside from differences in organisational practice that characterised particular subjects (for example, setting in mathematics and mixed ability in humanities), there was little difference found in classroom practices across subjects. Neither the literature review nor the case studies could identify ‘best case’ recommendations for pupil grouping that was related to any particular subject.

- **Transfer**: While the literature identified an important role for transition/transfer planning between primary and secondary schools, the case studies found little consistency of practice. Some primary and some secondary schools maintained high quality interchanges between partner/transfer schools and some schools showed little communication. Even where planning for transition/transfer was most developed, there was greater concentration on continuity of curriculum/test results (between schools) than on continuity of social planning and grouping that may support children’s learning.

- **Pupil and teacher training and development for working in groups**: Evidence from the literature review and case studies suggests that group work skills are not acquired naturally over time (although a substantial number of teachers suggested that pupils do not need to be taught these skills). Targeted training and support may be needed to develop group work skills amongst pupils and increase the confidence of teachers in using group work effectively without concerns that classroom management will suffer. While some teachers identified support for group working in government initiatives and strategies (DfES, 2004), practice of these strategies were rarely seen in classrooms. Teachers rarely stated that they received training for effective group work in their
classrooms (at pre- or in-service levels), and teachers rarely (except in SPRinG classes) provided training for their pupils to effectively engage in group working.

5.10 Points for Further Research:

- **Setting in primary schools**: Neither the literature review nor the case studies could find support for the setting of pupils for English or mathematics in Year 6 with regard to learning outcomes; further research is required to consider: (i) the extent to which setting is used in primary schools across England, and (ii) why, in the case study schools, mixed ability classes were consistently associated with higher levels of attainment than set classes.

- **Organisational grouping, learning and behaviour in secondary schools**: Case study evidence suggested that there was a ‘divide’ in learning and processes between schools that organised predominantly by setting and mixed ability. Research should be undertaken to identify whether greater pupil participation in negotiation found in mixed ability schools can be associated with increased learning and lower levels of classroom disruption.

- **Promoting inclusion in schools and classes**: Research should be undertaken that explores novel ways of promoting inclusion (of ability, ethnic background, gender, etc.) that are being practiced in some schools in England. Another area that may require further research is the effects of single-sex classes within co-educational schools (as identified by Younger, Warrington et al., 2005); in particular, our case studies found that explanations for this type of division was founded on stereotypical principles and there was no evidence that learning outcomes were enhanced for both males and females.

- **Pedagogy and autonomy**: As pupils are most likely to undertake their classroom work without the presence of a teacher (who may be teaching other individuals or groups), effective support for autonomous learning should be identified and disseminated amongst schools and teachers.

- **Subjects and setting**: Mathematics was the subject that used setting most consistently in both primary and secondary schools. Research should be undertaken to discover: (i) why the perception that setting may be of benefit to mathematics pupils exists (at school, department, teacher and pupils levels), and (ii) whether ‘de-setting’\(^{25}\) may be a useful practice in schools where results from setting are below local authority and national levels of attainment in mathematics.

- **Group work and training for effective group work**: A comparatively small proportion of schools have been involved in training and support for pupils and their teachers for effective participation within classrooms, especially through group work. A few ‘developmental’ programmes have been initiated in various schools and local authorities.

\(^{25}\) ‘De-setting’ is a term derived from the North American term ‘detracking’, and brings a range of participatory, inclusion and personalised practices into mathematics classrooms that have reverted from organisational grouping based on setting to mixed ability.
(for example, dialogic teaching undertaking in Sheffield and SPRinG/Working with Others programmes in the south of England). These programmes need to be evaluated and compared for both learning and social behaviour effects, and research should be planned and undertaken for this purpose (especially where programmes have been in effect for more than one year). On the basis of effective, mid- to long-term results, this research on effective group working and pupil participation can inform further policy as well as provide evidence for dissemination.
References


Appendices

Appendix A: Pupil Grouping Classroom Mapping Instrument

Grouping in Schools (A DfES funded Project)
Mapping Questionnaire

Research Officers will undertake mapping during ‘work’ activity (usually in the middle of a lesson), and use this mapping as a basis for discussion with teachers and pupils.

Class to be mapped.

1. Curriculum area: ________________________________
2. NC Year: _________
   (If Science lesson, please specify physics, chemistry or biology)
3. Date for Mapping Questionnaire to be completed by: ___________________________

Definition of ‘Groupings’

Students in the classroom may be grouped in many ways. It is important to clarify how we would like you to identify a grouping. We define a grouping as: students WORKING CLOSE to each other on the SAME TASK.

We realise that groupings can change very quickly, but want to capture intended grouping arrangement when completing the map.

PLEASE NOTE: for our purposes, groupings include the individual and the whole class as well as small groupings.

You may have a variety of grouping sizes working simultaneously on the same/different task(s). In the class there may be separate groupings of students working on the same or different task(s), or there may be as many groupings as students (if they are working on individual tasks). There may also be a combination of individual and grouped tasks. Alternatively you could be teaching students as a whole class.

More details about how to identify the groupings are included in Section A, part 5 and in the separate Example Booklet.

Please now complete the

A. Classroom Grouping Map   B. Grouping Information Grid   C. General Information Section.

Please follow the instructions in each section and refer to the Example booklet if you need clarification.

On completion of the Mapping Questionnaire please ensure that you have answered all the questions.

If you have any problems or require further information please feel free to contact the Jo Thorp (01273 643517). If you cannot reach Jo, then please contact Professor Peter Kutnick (01273 643 420).
**Section A: Classroom Grouping Map**

Please follow the instructions below. They will show you how to complete your map. You may want to refer to the Example Booklet for further clarification.

1. At a convenient time BEFORE the specified lesson, please draw a quick plan of your classroom, noting the position of desks/benches, classroom walls and other major features using the following key:

   - **M** - Male Student
   - **ST** - Support Teacher
   - **S** - Student Teacher
   - **F** - Female Student
   - **SA** - Support Assistant
   - **T** - Class Teacher
   - **A** - Other Adult
   - **Desk**
   - **Walls or classroom area**
   - **Computer**
   - **Board**
   - **Doorway**

2. At the time DURING the ‘working’ part of the lesson, note on the classroom plan where each student is working either with an M or F, denoting whether they are male or female. For use on the GRID, try to note the pupils’ names.

   Please also note SEN beside those students with special educational needs and EAL beside those students for whom English is an additional language. If the whole class has EAL the just note this beside the map to save time.

3. If some children are working outside the classroom, please note them to one side of your classroom plan.

4. Note the position of each adult including teacher and assistants. Mark T for class teacher, S for student teacher, ST for support teacher, SA for support assistant or A for other adult present in classroom.

5. Next, also DURING the lesson, draw a circle around those students WORKING CLOSE to each other on the SAME task and number each grouping. Remember, groupings may be as small as an individual or as large as the whole class and you may have a variety of group sizes working simultaneously.

   - If students are working on the same table but on different tasks you will need to treat them as separate groupings. (As with Groups 4 and 5, Example 2 in the Example Booklet).
   - In the case of the whole class working as a grouping, maybe led by the teacher, please draw a circle around all the students to indicate they are a single grouping. (As with Group 1, Example 3 in the Example Booklet)
   - If students are working individually without interacting but on the same task then please circle each individual BUT put the same number by each individual. (As with Grouping 7, Example 1 in the Example Booklet).

6. Please now

   - write a description of the task being undertaken beside the relevant group on the map. This can be very brief.
   - please choose the letter from the following list which best describes the interaction taking place within each group and write the letter beside the relevant group on the map.

   a) Individual task – different from that of other students – no interaction with other students.
   b) Individual task – same as other students – no interaction with other students.
   c) Individual task – same as other students – talking about task.
   d) Group task – working in two or more subgroups on the same task or on parts of the same task.
   e) Group task – working as a whole grouping on one task.
   f) Whole class – predominantly teacher presentation.
   g) Whole class – discussion between teacher and students or students and students.

   Please draw your map below
Section B: Grouping Information Grid – To be completed AFTER the lesson.

**Instructions.**
Please complete a row of the Grouping Information Grid for each group numbered on the plan you have drawn on the Classroom Grouping Map. Please underline your answers for Questions 7 and 10-15.

PLEASE NOTE: You may have identified a number of students working individually on the same task with a single number. To save you time, please only complete one row of the grid for these students.

If multiple rows have similar features, feel free to use ditto marks to indicate, for example, that the current grouping is working on an identical task as the group in the row above.

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</tr>
</tbody>
</table>
### Task Type

a) Explaining ideas/concepts – introducing material. This could include giving examples/demonstrating.

b) Explaining task procedure (e.g., about which questions to do, which equipment is needed).

c) Reflecting on the thinking process involved in the task.

d) Linking new ideas and existing ideas/experiences.

e) Analysing/exploiting existing ideas e.g., interpreting, negotiating, justifying, comparing.

f) Extending/building on/arriving at new ideas and understanding.

g) Applying existing knowledge and skills to new areas/material/problems.

h) Practising existing skills and/or verbatim recall.

i) Correction/checking of work.

j) Re-cap/ revise lesson material covered.

---

#### IF YOU HAVE MORE THAN 8 GROUPINGS, THEN PLEASE CONTINUE ON THE ADDITIONAL GROUPING INFORMATION GRID PROVIDED.

---

<table>
<thead>
<tr>
<th>7. Ability of students WITHIN the grouping you are describing:</th>
<th>8. Number of students with SEN within the grouping?</th>
<th>9. Number of students with EAL within the grouping?</th>
<th>10. Adult present with group-ing?</th>
<th>11. Who is the adult working with in the grouping?</th>
<th>12. Who composed the grouping?</th>
<th>13. Social relationship of grouping members:</th>
<th>14. What is the ethnic make-up of grouping members:</th>
</tr>
</thead>
</table>

After you have undertaken the mapping, please underline the single most important answer. It is likely that you will have to consult the class teacher or teaching assistant to complete these columns.

<table>
<thead>
<tr>
<th>Please underline the single most appropriate answer.</th>
<th>Students on the school’s SEN register at Stage 2 or above of the SEN Code of Practice.</th>
<th>teacher includes support teacher.</th>
<th>This refers to the grouping as a whole.</th>
<th>Children may come from different ethnic backgrounds (see Section C.6). Within each grouping, is the composition of a single or mixed</th>
<th></th>
</tr>
</thead>
</table>

- Low ability
- Middle ability
- High ability
- Mixed ability

| teacher | student t. | assistant | adult | whole group | part of group | an individual | n/a | teacher | pupil chosen | mix of above | other | friends | not friends | mix of above | n/a | Single | Mixed |

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Section C: General/Teacher Information

1. School name: ________________________________

2. School type:  
   - Mixed sex [ ]
   - All Girls [ ]
   - All Boys [ ]

3. Size of class on register: ______

4. Is this class set [ ] mixed ability [ ]?

5. IF SET:
   - Is the class high [ ] middle [ ] low [ ] ability within the year? [ ]
   - If the class is low ability, is it a class specifically for children with special educational needs? Yes [ ] No [ ]
   - Number of sets within the year for this curriculum area: ______
   - If 1 is the highest ability set within the year group, what is the number of this set? ______

5. Describe the ethnic make-up of the observed class. You may need to consult the teacher or teaching assistant.
   Identify proportions of:
   - White: %
     - White British ______
     - Irish ______
     - Traveller of Irish Heritage ______
     - Gypsy/Roma ______
     - Other White background ______
   - Mixed
     - White and Black Caribbean ______
     - White and Black African ______
     - White and Asian ______
     - Other Mixed background ______
   - Asian
     - Indian ______
     - Pakistani ______
     - Bangladeshi ______
     - Any other Asian background ______
   - Black
     - Black Caribbean ______
     - Black African ______
     - Any other Black background ______
   - Chinese ______
   - Any other ethnic group ______

Describe any efforts that the teacher or class have initiated to integrate the diverse ethnic groups found within this class
____________________________________________________________________________________________________________________
______________________________________________________________________________

7. Please complete this information:
   Date map completed:  
   Time map completed:  
   Number of those in class present at this time:  

Appendix B: Interview Schedule (Pupil)

PUPIL GROUPING AT KEY STAGE 3

Interview schedule: pupil interview [WITH FRAMEWORK REFERENCES]

Pupil interviews will be carried out in ‘focus groups’. These groups will be of no more than five pupils and will represent a spread of ability within the classes from which they are drawn. As well as seeking group responses the interviewer will seek to draw out divergence in the responses of pupils, and draw attention to differences in perspective. Focus groups will be drawn from a single year group (years 6, 7 and 9).

This schedule is designed as a guide for interviewers to gather responses around key areas identified in other research, and to provide consistency across sites. Questions may be added or the order may be altered as talk develops through the responses of interviewees.

Researchers will explain the purposes and process of the projects, then: (i) ensure that pupils consent to take part in the research; (ii) seek pupils’ permission to tape record interviews; (iii) reassure pupils that all interview data will be treated as strictly confidential, and that where we report on data it will be ensured that they are not identifiable.

Section 1: Organisational grouping

1. Can you tell me about how your classes at school are organised? Is this different for different subjects? [A + E]

2. If we take some of those examples do you prefer working in the classes for particular subjects? Can you explain in more detail? Are there particular subjects at school you think you learn most in? Why do you think this is? Do the other people in your classes have an effect on this? [A + E]

3. Can you tell me about some of the subjects you find most difficult? What helps you in those subjects? [E]

Section 2: Within class grouping

1. Do you work in small groups in your lessons? Can you tell me what these parts of your lessons are like? [C]

2. Does working in small groups help you in your learning? Why do you think this is? Is this true all the time? How many other people do you like to work with? Are there times when it is helpful for the whole class to work together, or listen to the teacher? [C + D]

3. When you are in small groups working together, do you often work closely with your teacher or another adult? [B + C]

4. Who are the people you learn with best? Why do you think this is? [B]

5. Does your teacher decide who you should work with or sit next to in groups? Do you find this helpful? [A + C]

6. How does your teacher help you work with others? Do any of your teachers talk with you about how to work together? Does your teacher ever ask you to think about how well you have worked with others? [G]

26 If within the piloting phase of interviews we find that there is difficulty in identifying differentiated responses from pupils we may trial individual interviews.
Appendix C: Interview Schedule (Teacher)

PUPIL GROUPING AT KEY STAGE 3
Interview schedule: teacher interview [WITH FRAMEWORK REFERENCES]

Within the fieldwork we will shadow individual pupils as they take part in different lessons through the day. Once we have completed these half day periods of shadowing/observation we will aim to interview the teachers from each lesson. Particularly in secondary schools this may mean arranging a convenient sample of teachers, in order to avoid undue staffing pressure on schools (there is limited funding available for teacher buy out). Teacher interviews will relate to practices/experiences/beliefs of organisational grouping and within class grouping.

While some of the questions may seem closed (yes/no answers could be given) they are designed as prompts to allow the interviewer and interviewee to explore surrounding issues.

This schedule is designed as a guide for interviewers to gather responses around key areas identified in other research, and to provide consistency across sites. Questions may be added or the order may be altered as talk develops through the responses of interviewees.

Section 1: Organisational grouping

1. Can you tell me about the ways the class groupings are arranged?
   - Across your school
   - Within the subject area observed
   - Within the year group of the pupil shadowed

   What were the reasons behind these choices? [A]

2. What do you feel are the main advantages/disadvantages of grouping classes in these ways? Probe: impact on learning. [A]

3. Do you believe there are any particular groups of pupils who benefit from these methods of grouping classes? Probe: gender, ethnicity, level of attainment, which method of grouping.

   Do you believe there are any particular groups of pupils who are disadvantaged by these methods of grouping classes? Probe: gender, ethnicity, level of attainment which method of grouping. [A + B]

4. Are there ways in which different methods of grouping classes are well suited to particular subjects? [A + E]

Section 2: Within class grouping

1. (Referring to mapping) At a point in the lesson this was how we mapped the groups pupils were working in. Is this typical of how you ask pupils to work together? [A]

2. How do you feel pupils working together in this way supports their learning?
   - Are there ways in which grouping pupils in this manner may negatively effect their learning? [A + C]

   Are there particular groups of pupils who benefit from working in groups in this way? Probe: low attaining pupils. [A + B]

   Do you feel this way of working is particularly suitable to your subject area? [A + E]

27 We note the curriculum area of each teacher, and this will help to provide curricular related insights regarding the effects of organisational grouping.
3. Throughout the lesson there were changes in the way group work was organised (e.g. whole class – small groups – whole class). Is this typical of your lessons? [C]

4. When pupils are working independently in small groups, how would you describe your role? (float/intervene/support specific groups) [C]

5. Do you decide where pupils sit in lessons?
   IF YES – What are the criteria you use to seat pupils?
   IF NO – Have you noticed particular characteristics of groups that work together? [C]

6. Can you tell me about the teaching approaches you used in the lesson? How do these approaches relate to the ways pupils learn together? [C]

7. Do you believe there are any particular groups of pupils who benefit from these teaching approaches?
   Probe: gender, ethnicity, level of attainment.

   Do you believe there are any particular groups of pupils who are disadvantaged by these teaching approaches? Probe: gender, ethnicity, level of attainment.

   **Do these strategies change across Key Stage 3, and if so how do they support pupils continued transmission between year groups?** [G]

8. Does school policy suggest any ways pupils should be encouraged to work in groups?
   Has CPD/Inset within your school addressed pupil grouping? Has any of this been particularly useful?
   Are there ways of working you have learned from colleagues, formally or informally? [G]

9. Did you receive any training relating to pupil grouping in your initial teacher education? [G]

10. Do you provide any training or encouragement for effective group work in your classes?
    IF YES – please describe any training and encouragement
    IF NO – (diplomatically) explore why this does not happen – due to teacher, department, school, policy? [G]
Appendix D: Interview Schedule (Transition)

PUPIL GROUPING AT KEY STAGE 3
Interview schedule: Transition Manager Interview [WITH FRAMEWORK REFERENCES]

We will interview teachers responsible for transition in each of the secondary schools visited.

This schedule is designed as a guide for interviewers to gather responses around key areas identified in other research, and to provide consistency across sites. Questions may be added or the order may be altered as talk develops through the responses of interviewees.

1. Do pupils generally experience the transition from primary to secondary school as positive? What are some of the key factors that lead to these feelings? [F]

2. What do you see as the key issues related to pupil grouping as pupils move from primary to secondary school?
   • In relation to the way classes are organised.
   • In relation to the way pupils are asked to sit and work together in lessons. [F]

3. Are there ways your school arranges grouping in Year 7 to support pupils in transition?
   What are some of the effects you have seen from these arrangements?
   Do you draw on the previous experiences of pupils in designing any of these strategies? [F]

4. Does your work with primary schools directly address pupil grouping (either in selecting pupils who may be grouped together or ways of working that may be learned from primary schools)? [F]

5. Do you organise ‘additional’ small group support for pupils who are working below national expectations? If so, how is this timetabled? Who teaches these groups? Can you suggest any evidence of the difference these groups make? And for which subjects? [B + F]
Appendix E: Interview Schedule (Manager)

PUPIL GROUPING AT KEY STAGE 3
Interview schedule: School Manager interview [WITH FRAMEWORK REFERENCES]

Interviews will be carried out with a school manager who has been identified by the school as having a strong overview of teaching practices, with which to respond to questions about pupil grouping.

This schedule is designed as a guide for interviewers to gather responses around key areas identified in other research, and to provide consistency across sites. Questions may be added or the order may be altered as talk develops through the responses of interviewees.

Section 1: Organisational grouping

1. Can you tell me about school policy relating to the ways pupils are grouped into classes?
   - Across your school
   - Within subject areas
   - Within Year groups

   How and why were these approaches chosen?

   What do you see as the key benefits/drawbacks to these approaches? (Prompt: evidence drawn on/examples) [A]

2. Do you believe there are any particular groups of pupils who benefit from these methods of grouping classes? Probe: gender, ethnicity, level of attainment.

   Do you believe there are any particular groups of pupils who are disadvantaged by these methods of grouping classes? Probe: gender, ethnicity, level of attainment [B]

3. Can you suggest any departments/curriculum areas/year groups in which pupil grouping has a significant positive impact on pupil’s learning? What outcomes has this led to? What are the key features of this positive work? [E]

4. Has CPD/Inset within your school addressed pupil grouping? Has any of this been particularly useful? [G]

Section 2: Within class grouping

1. Does school policy suggest any ways pupils could be encouraged to learn in groups, in their lessons? What are these?

   Why were these strategies chosen?

   How are teachers supported in implementing these strategies in their classrooms?
   What outcomes have you noticed from these ways of working? [A]

2. Are there any teaching or learning strategies which school policy encourages? How do these relate to the ways pupils learn together? [C]
Appendix F: Definitions of Organisational Grouping
(The Effects of Pupil Grouping: Literature Review, Kutnick et al., 2005b)

The terms streaming, banding, setting and mixed ability teaching refer to pupil grouping across a year group or school.

**Streaming** refers to the practice in which pupils are assigned to classes on the basis of overall assessment of their general ability, usually based on prior attainment or outcomes of cognitive or other tests. Pupils remain in their streamed classes for the majority of subjects.

**Banding** refers to the practice in which pupils are assigned to broad bands across a year group on the basis of overall assessment of general ability. Pupils remain in the bands for the majority of subjects and it is therefore a less differentiated form of streaming.

**Setting** refers to the practice in which pupils are grouped according to their ability in a particular subject. This means that they may be in higher or lower sets and with different peers in each subject. In practice, many pupils tend to be in similar level sets across several subjects although for others the levels vary considerably.

**Mixed-ability** refers to the practice in which pupils are grouped to reflect the full range of abilities for that year group. The spread of ability depends upon the ability range that exists in the school.

**Within-class grouping** refers to the practice of grouping pupils within a class. They may be grouped for specific activities or most of the time, and may be grouped by ability or on the basis of other criteria (for instance to ensure a deliberate gender mix, or on the basis of a specific learning need).