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Chapter 8

Toward a social pedagogy of classroom group work

Peter Blatchford*, Peter Kutnick, Ed Baines, Maurice Galton

School of Psychology and Human Development, Institute of Education, University of London, 25 Woburn Square, London WC1H OAA, UK

Abstract

In any classroom, pupils will be drawn together for many purposes and we can refer to such within classroom contexts as 'groupings'. The teacher often creates these, and the way that they are set up, and how they are used for particular learning purposes. If the relationships between grouping size, interaction type and learning tasks in groups are planned strategically then learning experiences will be more effective. However, research suggests that the relationships between these elements are often unplanned and the 'social pedagogic' potential of classroom learning is therefore unrealised. In this paper we explore the notion of social pedagogy in relation to group work. It is argued that research and theory relevant to group work in classrooms is limited, and that a new approach, sensitive to group work under everyday classroom conditions is required. This paper identifies key features of a social pedagogy of classroom group work, which can inform effective group work in classrooms. It also describes the background to a current large scale UK project which has been set up to design with teachers a programme of high quality group work in classrooms at both primary and secondary phases.
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1. The case for group work

At the first Annual Conference of the UK ESRC funded Teaching and Learning Research Programme, there was an address by an invited American speaker—Lauren Resnick. She proposed an approach to pedagogy that she hoped would act as

*Corresponding author. Tel.: +44-20-7612-6268; fax: +44-20-7612-6304.
E-mail address: p.blatchford@ioe.ac.uk (P. Blatchford).

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the basis of a new drive in educational reform in the USA, and which would help raise the cognitive competence and educational achievement of the least educationally advantaged children (Resnick, 2000). Drawing on now well-established approaches in psychology, she identified two core features of a new pedagogy. The first she called 'knowledge-based constructivism'—a deliberate oxymoron that was meant to capture the now well understood interpretive, inferential basis of learning, as well as the responsibility of an educational system to provide learners with high quality material from which they can construct. The second core component of a new approach to pedagogy draws on social developmental and motivational theory and is called by Resnick 'effort-based learning'. She argues that it is important not to socialise learners into inhibiting views of their own learning and intelligence. Drawing on ideas by Carol Dweck, she argues it is important for learners to adopt an 'incremental' not an 'entity' theory of their own intelligence, and it is important for learners to acquire robust and enduring 'habits of mind' that assume effort and application are important in learning.

We applaud Resnick's approach but we believe it is incomplete. We would want to add a third feature that we believe is equally essential as a core feature of a new pedagogy. This is a consideration of contexts within which learning takes place, and, in the school environment, this means a systematic appreciation of social contexts within classrooms. There has been a tendency in educational psychology and educational research, for example, concerning school and teacher effectiveness, to consider the effects of teaching and teacher pupil interactions independently of the environment in which these interactions occur. Classroom processes have been viewed in terms of teachers' actions toward pupils and pupils' learning or attainments, rather than in terms of contextual dimensions affecting pupils and teachers together. We argue that learning and motivation are both developed in a social context. The classroom is a particular context with particular features different to others (Pellegrini & Blatchford, 2000), and its effect on learning, motivation and development needs to be accounted for if we are to have a full picture of what is necessary for educational reform.

Taking this perspective further, in any classroom there are identifiable contexts for learning. These contexts can be described in terms of a number of dimensions, including the number of members in a classroom group (ranging from an individual to the whole class), the nature of the interaction between members in the group, and the type of learning task that is being undertaken. In any classroom, pupils will be drawn together for many purposes and we can refer to such within classroom contexts as 'groupings'. The teacher often creates these, and the way that they are set up, and how they are used for particular learning purposes, will be a main factor affecting the educational experiences of pupils in the class. If the relationships between grouping size, interaction type and learning tasks are planned strategically then learning experiences will be more effective. However, research, which is described below, suggests that the relationships between these elements are often unplanned and the 'social pedagogic' potential of classroom learning is therefore unrealised. The development of a full social pedagogy of classroom learning is long overdue but beyond the scope of this paper. Instead, in this paper we explore the

notion of social pedagogy only in relation to one aspect of the classroom context, i.e., group work. It is argued that research and theory relevant to group work in classrooms is limited, and that a new approach, sensitive to group work under everyday classroom conditions is required. This paper identifies key features of a social pedagogy of classroom learning, which can inform effective group work in classrooms. It also describes the background to a current large scale UK project which has been set up to design with teachers a programme of high quality group work in classrooms at both primary and secondary phases.

1.1. What is group work?

It should be clear that there is more to group work than sitting students in groups and asking them to work together. There may be talk between pupils of course but this can be relatively low level and not about the work in hand, and rarely in service of a joint activity. By group work we mean pupils working together as a group or team. The teacher may be involved at various stages but the particular feature of group work—perhaps its defining characteristic—is that the balance of ownership and control of the work shifts toward the pupils themselves. Group work should involve children as *co-learners* (Zajac & Hartup, 1997), not just one pupil helping another. We have an inclusive view of group work—and would include what is sometimes called *cooperative* group work—but see the group basis for classroom learning extending beyond this particular approach. Whereas cooperative group work is often associated with particularly structured groups, often with a heterogeneous mixture of ability, gender and ethnicity, and particular learning tasks, pupils may, during their everyday classroom activities, be asked to undertake group work for a variety of tasks and in a variety of groupings. For group work to be effective, pupils and teachers must be adaptable to normal classroom conditions, which will involve a classroom populated by many other children.

2. Background: the current place of group work in UK schools

2.1. Policy on groups

We only comment here on policy regarding UK schools though it is our experience that the general situation is similar in many other countries. The overriding conclusion is that group work as just defined has a very minor role in government policy. Recent government legislation and advice, e.g., on literacy and numeracy strategies, and on science at KS3 (11–14 years), rarely mention group work. Importantly, when group work is mentioned, e.g., in the suggested format for the 'literacy hour' in primary schools, it is in effect a teacher or adult led context, little different pedagogically from whole class teaching, or individual work when seated in groups. A central tenet of this paper is that group work does not have the place it deserves in the school curriculum. A connected point is that debate and policy on grouping is not yet informed by good empirical research. Research to date does not

provide sufficient information to help teachers apply such strategies effectively within normal classroom contexts.

2.2. The current state of group work in UK schools

Accounts of the use of groups in primary classrooms, particularly in the UK (Bennett, Desforges, Cockburn, & Wilkinson, 1984; Blatchford, Kutnick, & Baines, 1999; Galton, Simon, & Croll, 1980; Galton, Hargreaves, Comber Wall, & Pell, 1999; Kutnick & Rogers, 1994), demonstrate that there is little strategic planning of pupil grouping in primary schools, and that it is viewed by many teachers as problematic. In an often quoted finding, Galton et al. (1980), showed that within the majority of primary classrooms children sit *in* groups but rarely interact and work *as* groups. Instead, pupils work individually or as a whole class. When sitting together in an environment that does not support productive group work, pupils can be drawn off-task by social talk. Furthermore, a replication study two decades later showed only a slight decrease in pupil social interaction in favour of task related exchanges within groups. Even then, these task-focused interactions between pupils mainly involved exchanging information rather than discussing ideas (Galton et al., 1999).

Two of the authors (PB and PK) have directed a programme of research in both primary and secondary schools in England, which has provided a description of grouping practices in classrooms. The purpose was to provide a systematic, quantitative, and multi-dimensional description of grouping practices in relation to learning tasks, curriculum areas and year groups across the primary and secondary stages (see Blatchford, Baines, Kutnick, & Martin, 2001a; Blatchford et al., 1999; Blatchford, Kutnick, Clark, MacIntyre, & Baines, 2001b; Kutnick, Blatchford, & Baines, 2002). Five core themes were investigated by use of a teacher completed classroom grouping map technique: the size and number of groups, group composition, e.g., in terms of ability of child and sex, adult presence in groups, the curriculum and task activities in groups, and the type of interaction between children in groups. Also investigated were teachers' planning, management of attitude to pupils group work, and teacher experience of and training in group work.

The study allowed an analysis of changes with age in grouping practices, and these are reported in Baines, Blatchford, and Kutnick (this volume). One main finding was that groupings in classrooms are not often formed on the basis of a strategic educational view of their purpose, and teachers showed little awareness of the social pedagogic potential of various grouping arrangements. There was little attention paid to group size or composition when approaching tasks as diverse as cognitive problem solving or repetitive practice, and little support for pupil-pupil interactions within groups. Teachers' approach to group work was to a large extent an adaptation to the demands of maintaining pupil attention and classroom control, and to classroom layout. Overall, teachers had little faith in pupils' ability to work in groups. This attitude is mutually reinforcing, in that pupils had little opportunity to work effectively in groups and were not prepared for it.

There is a sizeable number of pupils and teachers who do not appear to have specific preparation in the use of group work. In a survey of primary schools it was found that one in four teachers said that their pupils received training for group work but on closer inspection it was found that this was rarely more than discussion of group work as part of, e.g., Personal, Social and Moral Education (Blatchford et al., 1999). In the survey of secondary schools, it was found that only one third of pupils had received training. Numbers of teachers in the secondary school survey who said *they* had received some training in the use of group work were similar to the primary survey. For the most part this was in the course of initial training; only 1 in 10 had subsequent in-service training involving group work (Blatchford et al., 2001b).

A number of studies also indicate that teachers and pupils have doubts about, and difficulties implementing, group work in classrooms (Bennett & Dunne, 1992; Cowie, Smith, Boulton, & Laver, 1994; Galton & Williamson, 1992; Plummer & Dudley, 1993). Teachers' concerns about group work include: the loss of control, increased disruption and off task behaviour (Cohen & Intilli, 1981); beliefs that children are unable to learn from one another (Lewis & Cowie, 1993); beliefs that group-work is overly time consuming, that group-work means that brighter children just end up helping the less able pupils, and that assessing children when working in interactive groups is problematic (Plummer & Dudley, 1993). These concerns may reflect the failure to construct meaningful settings in which group work can take place. Galton and Williamson (1992) noted that little attention was given to setting up groups, guiding group planning or generally enabling children to function as a group within the classroom. Rather, pupils were assigned to groups with the emphasis on the task outcome rather than on the processes whereby the outcome could be achieved. Under these circumstances considerable ambiguity of purpose occurred, resulting in insecurity within the group, as predicted by Doyle (1986).

Further problems reported by teachers, while attempting to implement group work, concern the selection and design of effective tasks and task structures that legitimise group interaction (Bennett & Dunne, 1992; Harwood, 1995) and the potential for increases in levels of conflict when pupils engage in group discussions (Cowie et al., 1994). This suggests a need for improved pupil training in group work skills under normal classroom conditions. More importantly, it suggests that little improvement will take place unless researchers work in partnership with teachers so that these concerns are fully taken into account at the design stage, and that the evidence-base that results is applicable to authentic classroom settings. It is this principle that governs the approach to be advanced in this paper.

3. Experimental research on the effectiveness of working in groups

Experimental research on the effectiveness of within-class groupings has demonstrated positive, albeit modest, effects on pupil achievement, better attitudes (particularly in multi-cultural settings) and improved social climate within classrooms (Johnson & Johnson, 1987; Pepitone, 1980; Slavin, 1990). This research is

mainly based on small groups, predominantly explores the effects of a highly structured co-operative framework, experimentally restructures classes into grouped (or non-grouped) situations, and typically provides a specific mandatory training programme for teachers in the management of co-operative groups. Many of these studies have been evaluated in meta-analytic and other reviews (Kulik & Kulik, 1992; Lou et al., 1996; Slavin, 1987). These reviews demonstrate that with training and support teachers using small groups can enhance certain forms of pupil learning.

The imposed structures and methods, identified above, may not always meet the needs of teachers operating in more 'authentic' classroom settings where multiple groups and learning tasks may be undertaken simultaneously (Blatchford et al., 1999; Galton et al., 1999). Doyle (1986) argues that there is little information on the problems classroom teachers may experience when managing cooperative group learning, particularly in relation to classroom management as a whole. If, therefore, undue consideration is given to these experimental accounts, a far greater social pedagogic understanding of the potential of classroom groupings may be hindered. The experimental results reported in meta-analyses are subject to further limitations in that their procedures have been applied without distinguishing between different curricula contexts and task demands—factors that may partly explain different levels of reported success (Creemers, 1994). Attention has not been given to possible variations between the different ages of pupil groups (Lou et al., 1996). In addition, much research on grouping has adopted a 'black box' approach so that the processes by which these groupings achieve their effects are not fully explored. Processes, such as the use of hierarchical and/or mutual scaffolding to bring about cognitive enhancement within groups (Rogoff, 1990; Rosenshine, Meister, & Chapman, 1996), variations in motivation and attitudes towards cooperative methods (Rogers, 1994) and the extent to which pupils accept ownership for the consequences of joint decisions (Galton & Williamson, 1992), are all likely to have a bearing on the outcome resulting from a decision to use various grouping strategies.

More recent research has extended understanding of specific aspects of working in groups, and good examples can be found in other papers in this volume. The perspective advanced in this paper is somewhat different, in that it is an inclusive view of group work in classrooms; studies reported in this volume are valuable but there is also a need to integrate their various insights and provide an overall framework to guide the use of group work across the curriculum and over the school year. This point is taken up below, after an examination of the theoretical basis for group work in classrooms.

4. Theoretical approaches to learning and classroom settings

Over the last century, researchers in the psychological tradition, from Baldwin (1897) through to Vygotsky (1978) and including earlier writings of Piaget (1928, 1959), have underlined the importance of interaction between social, affective and cognitive states in development and learning and have thus provided a theoretical rationale for the use of groupings in instructional settings. These ideas have

promoted the view that children's thinking is a function of prior knowledge and the individual's capacity to learn with help from either adults or peers (Rogoff, 1990; Wood, 1998) and, as a result, led to an emphasis on the benefits of peer tutoring, collaborative and cooperative learning for cognitive development (c.f. Damon & Phelps, 1989; Light & Perret-Clermont, 1991). There are also aspects of association, reinforcement and practice in instructional learning tasks (as defined by Norman, 1978; and elaborated by Edwards, 1994) that have implications for relationships between teachers and pupils and learning in classrooms.

There is not space here to review fully theoretical perspectives relevant to group work (see reviews in Webb & Palincsar, 1996; O'Donnell & King, 1999). The two main theoretical positions used in relation to group work have their origin in the writings of Piaget and Vygotsky (see chapters in O'Donnell & King, 1999). In this paper we wish to emphasise that existing theory does not do justice to the huge potential for group work. As we have identified, research in support of group work has tended to be experimental and sometimes assumes the benefits of competition between groups (which we are cautious about), and theory has tended to concentrate on cognitive development. Another basic problem is that current notions of 'pedagogy' tend to have at their heart the teacher child relation. The concept of pedagogy needs to be extended to allow for other social relations, in particular that involving co-learners or peers. The importance of this extension is supported by studies which show that pupils spend greater amounts of time with their peers, than with their teachers (Galton et al., 1980; Tizard, Blatchford, Burke, Farquhar, & Plewis, 1988), yet teachers typically plan for their interactions with pupils, but not interactions between pupils (Kutnick et al., 2002). The potential for group work is more extensive and actually more exciting than current theories allow. There is a need for an appreciation of group work in authentic classroom contexts—of group work as part of a teacher's general approach to classroom organisation and learning. To support such a view we need to revise theories of learning and approaches to pedagogy.

When considering learning relationships within classroom contexts, it is helpful to first take into account ways of conceptualising environmental influences on behaviour. One useful but neglected theoretical tradition seeks to interpret learning and development within ecologically meaningful environmental contexts. Bronfenbrenner (1979) is often credited with the recognition of educational processes taking place in hierarchically organised settings. Pellegrini and Blatchford (2000) have suggested that within the 'Microsystems' of a school, there will be smaller within-school contexts such as the classroom and playground which have qualitatively distinct sets of relationships, rules and dynamics that promote/hinder learning and social development. In this tradition, Doyle (1986) has reviewed a wealth of research showing the multi-faceted nature of classrooms, with important consequences for the management of different learning task demands. Of particular relevance to this paper are the ideas stemming from the ecological psychology of Barker (1968), where contexts are nested *within* classrooms and where these contexts provide their own set of 'forces' or 'signals' which pull events and participants along with them (Kounin & Gump, 1974). An important 'within class' context is the

organisation of pupils into separate groups within which they are required to engage on set learning tasks.

When it comes to understanding of learning relationships within these contexts, there are specific limitations to existing theories. Given the predominance of Vygotskian inspired approaches to learning and instruction in school contexts, we here concentrate on an analysis of a few, selected features in terms of their relation to pupil group work. We feel that some main tenets of Vygotskian thought, e.g., the movement from inter to intra psychological functioning, the place of intersubjectivity, the notion of the ZPD, and the role of adult/child social relationships in cognitive development, can be extended in interesting ways through recognition of processes connected to peer relations. Learning contexts in Vygotskian thought have tended to stress the one to one tutorial relationship, usually adult to child, or at least expert to novice, and relations between intellectual equals (and relationships around informal, playful activities), are not therefore central. However, pupil-pupil or 'peer' relations, as developmental psychology has shown (Pellegrini & Blatchford, 2000), can be an inherently motivating context for action and learning. In contrast to adult child relations, they are more horizontally organised and power is more likely to be evenly shared. Peer relations, e.g., when it comes to the ZPD, would tend to be seen as an inferior version of the adult child tutoring relationships, and this hinges on them being seen in similar tutor to tutee relationship terms. But it could be that we need to recognise and value the distinctively DIFFERENT nature of peer to adult child relations. And this may require more recognition of the qualities that make them distinctively different to adult child relations (see Damon & Phelps, 1989; Pellegrini & Blatchford, 2000).

The informal nature of peer activities/relations may be significant. It is interesting that play does figure in Vygotskian thought but in service of, or as a reflection of, individual intellectual development. Consideration of peer relations may help bring out the potential of more informal contexts for learning. It may be that relationships between peers and friends do more for learning and the movement from inter to intra psychological functioning than is commonly recognised.

There are two essential and connected processes in Vygotskian thought—intersubjectivity and the movement from inter to intra psychological functioning (Wertsch, 1985). The concept of intersubjectivity concerns in what sense, and under what conditions, two persons engage in a dialogue and transcend their own different private worlds, albeit temporarily, and attain intersubjectivity. Connected to this, it is important to consider processes through which the communicative context between adults and children establish and maintain intersubjectivity. "*The challenge to the adult is to find a way to communicate with the child such that the latter can participate at least in a minimal way in interpsychological functioning...*" "*This communication ...(that is, intersubjectivity) lays the groundwork for the transition to intra-psychological functioning.*" (Wertsch, p. 161). So intersubjectivity is considered necessary for communicative episodes to aid the movement from inter to intra psychological functioning. We feel it is worth considering ways in which the peer group can aid this process. Given the difficulties adults can have in adjusting to the child's way of looking at things, it may not be too provocative to suggest that peers

are for some things a *better* context for intersubjectivity—they can often understand each other more directly. Peer relations may in other words be a good inter-psychological context to further intra-psychological functioning.

Another connected point stems from an examination of Vygotsky's treatment of socialisation. One of the main puzzles addressed by developmental psychology has been about socialisation—i.e., about the processes involved in the integration of the child into the social and cultural world of adults. It is of course recognised that adults do not just offer information to children and insist children function independently—it is more subtle, gradual and complex than that. The key, according to Vygotsky, is the tendency of adults as part of the socialisation process to encourage increasing participation of children in joint activities. However, once again the role of peer relations may be undervalued here. There is something paradoxical in the view that cognitive development depends on adults having to be very skilful in accommodating children into joint actions, and in a sense pretending to be at a level they are not, while children (e.g., during play) typically and naturally have no such difficulty with each other—just watch any school playground (Pellegrini & Blatchford, 2002) or friends in the home. So there is an odd way in which we marvel at the skilful way adults can act informally to integrate children into joint actions with benefits for children cognitive development, while we ignore the inherently informal and motivating nature of peer and friendship relations. A further related aspect concerns the different types of relationship children have with adults and other children; adult child relations are more likely to be hierarchical and involve assertion of power (or in the case of the classroom, the correct answer), while child-child relations involve more mutuality, and power (and in the classroom, thinking and learning) is more likely to be shared by equals.

The main conclusion to be drawn from this selective analysis of Vygotskian concepts is that they are limited when it comes to learning situations in school classrooms involving co-learners. We feel this is true, for other reasons that we have not space to describe here, of Piagetian theory as well. (Existing theories are also limited in the case of other, non-cognitive outcomes of group work; existing theories of motivation, for example, are limited in allowing a full appreciation of the possible effects of group work on motivation and attitudes to school work.) If pupil groupings are to work effectively, there is a need to develop a coherent social pedagogy of the use of groupings within classrooms that promote school-based achievement and motivation.

5. Toward a social pedagogy of classroom group work

The discussion so far in this paper suggests the following conclusions. Empirical research is limited in concentrating on experimental manipulations that may not be applicable to everyday classroom contexts, or has concentrated on specific features of group work that do not provide the more holistic and practical perspective teachers need to implement group work. Theory is limited in not allowing for classroom contextual influences on learning and the role of peer interaction in

learning. Descriptive research shows that group work is rare and often of low quality, and that teachers and pupils have concerns about it. The main impetus for the SPRinG (Social Pedagogic Research into Grouping) project was therefore to address the wide gap between the potential of group work to influence learning, motivation and attitudes to learning and relationships, on the one hand, and the limited use of group work in schools, on the other hand. It was also driven by the concerns of teachers and pupils that they were not able to get as much out of group work as they would like. There was also a concern that group work became an everyday part of classroom activities, and was used across the whole curriculum. The situation suggested that a new approach to conceptualising group work in classrooms was needed.

The SPRinG project was set up to develop an approach to group work that could be used in primary and secondary schools. The project was funded by the UK Economic and Social Research Council as part of the Teaching and Learning Research Programme Phase 2. Approaches and materials were developed on three sites—KS1 (5–7 years) at the University of Brighton, KS2 (7–11 years) at the Institute of Education in London, and KS3 (11–14 years) at the University of Cambridge. The project draws on previous research of the authors and seeks to bring various theoretical perspectives together by emphasising a strategic approach to classroom grouping for instruction. This approach, based on an analysis of theoretical and research literature on grouping in relation to learning, emphasises that certain types of task and learning outcomes may be more suited to particular grouping size, composition and interaction arrangements. Our approach to group work also draws on a year-long collaboration with teachers, which constituted the first stage of the project, in the course of which we tested ideas stemming from theory and research, and developed a programme of activities and principles. Over the course of the year valuable lessons were learned about emerging principles concerning effective group work, what activities worked well and what strategies needed to be adopted to encourage good working habits in groups.

The SPRinG project has been designed with a three-component model of expected pupil outcomes. The first concerns learning outcomes. Group work is likely to most relevant to conceptual development, thinking, reasoning and problem solving. Taking up a basic point made by Damon (1994) (quoted in Webb & Palincsar, 1996), group work is probably best suited to learning processes which involve giving up or transcending current levels of understanding to reach a new perspective, rather than learning processes which involve the acquisition of new skills or strategies, or the individualism associated with practice-based tasks. This aim for group work is consistent with Resnick's notion of 'knowledge-based constructivism' in the sense that it should be designed to encourage interpretive, inferential aspects of learning, in the context of high quality material and carefully constructed contexts within which the groups work. The second main expected outcome of group work is in terms of pupils' motivation and attitudes to work, and a belief that success at schoolwork can come through their own efforts and application, rather than from instruction. In this sense, group work can be designed to encourage what Resnick calls 'effort-based

learning', and is consistent with a wealth of research and theory concerning motivation in educational contexts (Pintrich & Schunk, 1996). The third main expected outcome of the group work is the interactive and dialogic features of group work. Consistent with other research (Slavin, 1990b; Webb & Palincsar, 1996), group work can be expected to affect pupil on-task behaviour, quality of dialogue in groups (e.g., more giving and receiving help, more joint construction of ideas), more sustained interactions in groups, and more positive relations between pupils. It seems clear that we cannot teach children to behave in socially responsible ways—this is not something that can be learned by instruction, like learning to read or subtraction. Behaving in a constructive way in relation to others is best furthered by children being given opportunities to debate and recognise alternative points of view, and by being held responsible for their own behaviour.

A basic idea at the heart of our approach is that group work, like classrooms (Doyle, 1986), has to reflect the multidimensional nature of activities in school. Building on our earlier research, described above, and in Baines, Blatchford, and Kutnick (this volume), the SPRinG project is build around a social pedagogical approach which involves a framework with four key dimensions:

1. The classroom context: Preparing the classroom and the groups
2. Interactions between children: Preparing and developing pupil skills
3. The teacher's role: Preparing adults for working with groups
4. Tasks: Preparing the lessons and group work activities

Every act of group work can be analysed in terms of these four dimensions. We have found that they are important factors in a description of group work under normal classroom conditions (see Baines, Blatchford, & Kutnick, this volume), and are a useful framework around which to build a programme of principles for teachers when setting up group work in their classrooms. Consideration of the dimensions, and their interrelationships, extends this account and is at the heart of a social pedagogy of classroom group work. In this section we say more about each dimension and implications for effective group work in classrooms. This section is not intended as a detailed research review (for this see other papers in this volume), and we do not present practical suggestions for teachers contained in the SPRinG group work intervention.

5.1. The classroom context: preparing the classroom and the groups

Our approach rests on the view that group work has to be considered in the wider context of the whole classroom, and the first theme concerns the classroom context within which groups will operate. Included here are the 'fixed' factors such as classroom and class size and seating arrangements in the classroom, and also the size and number of groups, and the composition of groups. The teacher will have a key role in organising these latter dimensions in a strategic way in service of effective group work.

5.1.1. Class seating arrangements

There has been a tradition of research that has studied the effect of different seating patterns, typically rows versus tables, on pupil attention (e.g., Axelrod et al., 1979; Bennett & Blundell, 1983) but these are typically short term interventions, involving practice type tasks, and do not bear directly on classroom organisation in relation to group work. It has been our experience, however, that seating arrangements are important in supporting working arrangements. Flexible use of furniture and seating can make a big difference, and using the physical layout and space to encourage pupil interaction in different working situations is important. Seating patterns need to be consistent with learning aims; children seated in rows may be fine for teacher presentations, but would not be conducive to group work.

5.1.2. Group size

Most research on grouping examines composition rather than size (Webb, Baxter, & Thompson, 1997), although Lou et al.'s (1996) review suggests the latter variable may be an important factor for effective learning. There is some evidence that larger class sizes result in larger within class groups, though smaller groups are preferable, especially with primary aged pupils, and those not used to group work (Blatchford et al., 1999; Lou et al., 1996). This has also been our experience from working with teachers. A larger group of 6–8 might need to be smaller, if it is to function independently of adult help. Group size, like other classroom contextual features, does need to be considered in relation to classroom processes as a whole. The size of groups will need to be appropriate to the age and experience of pupils, the purpose of group-work and the task at hand. There are limitations in research that seeks to isolate the benefits of one group size over another. A small collaborative group may be successful when taken in isolation, but unsuccessful from a whole class perspective (it may, for example, be too demanding of teacher time). Moreover, large groups may in reality undertake classroom tasks as smaller working groups, such as pairs. Further evidence on group size and implications for pedagogy can be found in Kutnick (1994).

There are also likely to be connections with other dimensions, for example, between group size and the sex-mix of groups. Specifically, we have found that a larger proportion of boys (than girls) are assigned to work alone, which may reflect teacher's concern with control of behaviour and attention—a possibility further highlighted by the high level of adult presence (teacher and non-teacher) with these groupings (Kutnick et al., 2002). Group size and the ability mix of groups can also be connected. One surprising finding is the predominant use of same-ability level within groupings in UK schools, even in the case of the youngest children in school (Kutnick et al., 2002). This may work to the disadvantage of low ability children, especially boys. Low ability pupils tend to work as individuals and or in small groupings (Pollard & Filer, 2000). But when undertaking tasks in small groups, low ability pupils rarely have the range of cognitive insight to challenge other's ideas or elaborate on their own ideas (Webb, 1989). Additionally, Kutnick et al. (2002) found that low ability pupils (mainly boys) who were assigned individual tasks had an adult present but in half these cases the adult was not the teacher. In contrast, when an

adult worked with high ability pupils (mainly girls), there was a much greater likelihood that the adult was the teacher. The use of classroom assistants to release teachers from supporting the low ability (mainly boys) groupings is brought into question here.

5.1.3. The number of groups in the class

It is worth noting one inevitable consequence of organising classrooms into smaller groups; it will result in more groups in the class, and this can place heavy demands on the teacher. In a class with of 32, a decision to use groups with four children in each would mean the teacher having to plan for and monitor eight groups. Given that children in groups are rarely trained in skills that enable them to work autonomously away from their tutor, the more groups found in a classroom the more likely are associated constant and conflicting demands for teacher attention and pupils going off-task while they await teacher attention. It might be tempting to seek to maintain a smaller number of large groups, but this may result in negative feelings towards group-work. If the number of groups poses a particular problem, the teacher can think about working in ways that mean that only a few groups work at a time while the remainder of the class work individually. As seen in Baines et al. (this volume), by the end of primary schooling and on into secondary school, a class may well be working in pairs, and here the challenge will be to provide them with skills to work autonomously from the teacher, as well as setting them tasks at an appropriate degree of challenge that does not require constant teacher presence.

5.1.4. Group stability

As far as we know, this feature of groups has not been researched, probably because it reflects an interest in group functioning over time, rather than a focus on short term interventions. But the stability of groups over time has emerged in our work as a crucial aspect of successful group work, particularly at primary school level, where children tend to stay together as a class for the whole year and for all subjects. There are many things to consider when deciding on the relative merits of changing groups vs. maintaining stable groups. Much will depend on the characteristics of the children, the success of the work the groups engage in, the dynamics of the class, the willingness of the children to work with assigned work partners, as well as close friends, and so on. However, we have found advantages, where possible, in maintaining stable groups. It is widely assumed that groups go through stages in their development. One well-known sequence is 'forming', 'storming', 'norming' and 'performing' (Tuckmann, 1965). These are rather idealised stages, not necessarily the case in reality, but they are helpful when considering likely changes to group dynamics over time, which have consequences for how teachers deal with groups. For example, in the face of new challenges, groups can revert to forming and storming modes and the longer the group has been running the less likely this is to happen. By changing group membership there is risk that groups do not have time to develop mutual strategies to help overcome insecurities and conflict. It is thus important to give groups the opportunity to build up trust, sensitivity, and respect for each other, and to resolve conflicts through repeated opportunities to

work and have fun together. While this final point may appear obvious, our surveys show that teachers do not tend to plan for group development.

5.1.5. Group composition

Most research as been on the ability mix of groups, but groups will vary in terms of other factors, including the gender-mix, and the mix of friends and non-friends. Some strategies recommend same ability groups but this can be for classroom management rather than for learning purposes. Group work necessarily involves a certain amount of ability mixing, though again this will be affected by the ability mix of the whole class. The issue of pupil choice over the composition of groups is also problematic. Allowing children to select whom they work with can reinforce social divisions (e.g., on the basis of gender, ability) and isolate children who are not chosen. Perhaps the obvious compromise is that children should be included in the decision making about criteria to use when composing the groups as well as being asked to consider the advantages of working with peers other than their close friends.

5.2. Interactions between children: preparing and developing pupil skills for group work

We have seen that pupils can have difficulties and concerns with group work. Perhaps the most well established conclusion concerning effective group work is that *group work skills have to be developed*: we cannot just put children into groups and expect them to work well together. There is no doubt that working well together does not always come easy to children, and they will need guidance and support. Group work is therefore unlikely to be successful without a lot of hard work and preparation, and this is likely to extend over the course of a school year. It is well known (see Gillies, this volume) that pupils need to have the skills to communicate effectively through listening, explaining and sharing ideas. But effective group work involves more than this; pupils have to learn to trust and respect each other (Galton, 1990). They also need skills on how to plan and organise their group work with the aim of working more autonomously and engaging actively in learning. The approach that the SPRinG project has adopted is to organise activities for pupils around a developmental sequence likely to enhance the social relationships between all pupils in classrooms. This sequence begins with an emphasis on social support and trust skills, followed by communication skills, leading to more advanced problem solving activities, and finally integration into the curriculum. The approach is based on the naturalistic study of close social relationships (Kutnick & Manson, 1998), and has been devised to overcome problems associated with social skills training programmes (Ogilvy, 1994). In line with other comments made in this paper, pupil skills for group work need to be considered in relation to the wider classroom context. They will not be long lasting if they are approached in isolation and specific just to group work. They will benefit from integration into more general rules and ways of behaving in the class; indeed, such integration can create classroom norms for social inclusion.

A key aim in effective group work is the development of pupil independence, and a shift in responsibility for learning from teacher to pupil. This is made difficult because there is a common assumption, at primary school level at least, that children are not able to work together independently. Every teacher knows that some pupils have conflicting personalities and may not work well together. Some children may disrupt classroom activities, and solitary or very quiet children may hinder the group. Sometimes ethnic, gender and other group differences make it difficult for certain children to work together. But one message that has emerged strongly from our work is that it is important not to allow personality types to dictate the success, or failure, of groups. Pupils should be encouraged to work in groups whatever the personality types involved. The general point is that potential for difficulty can at the same time be the basis for the potential of group work to improve behaviour. If not, then difficulties between pupils may lie below the surface and inhibit all forms of classroom behaviour and learning. So, paradoxically, the setting where difficulties in children's behaviour and relationships are most evident may be where such problems are most effectively dealt with.

5.3. The teacher's role: preparing teachers for working with groups

We have seen that teachers as well as pupils have difficulties and concerns with group work. Training programmes will need to be sensitive to wider classroom issues. Programmes developed in one context or one country may not readily transfer to others. They will need to allow teachers' freedom to adapt grouping strategies for different purposes and tasks. They will need to be consistent with the wider ethos of teachers; some USA programmes are designed around the notion of competition and reward structures, but these can conflict with the ethos of many UK schools. Galton and Williamson's (1992) study suggests teachers in the UK need to take 'ownership' of the approach to developing skills of group work among their pupils if the learning tasks are to be undertaken successfully. It may be helpful to consider the teacher's role in relation to group work in terms of Gage's (1978) seminal definition of pedagogy as both the science and the art of teaching. In other words, researchers present information based on the best research evidence available (the science), for example, on the importance of key skills for effective group work, such as negotiation (Cowie et al., 1994), but the manner in which these skills are transmitted to pupils will be a matter for participating teachers to decide since they are the best judges of what works best in the specific context in which they practise (the art).

The role of teachers with regard to groups is likely to be crucial. We suggest four ways of conceiving how teachers can make group work productive. One is in terms of *lowering the risk for pupils and making work fun* (at least some of the time). We have seen that pupils can feel threatened by group work. It can help to lower the risk involved, while not minimising the challenge. A second and connected way to think about the teacher's role is in terms of 'scaffolding' group work. The teacher has a central role in making group work more effective and developing pupils' group-working skills. One way of lowering the risk for pupils, while ensuring the challenge

remains high, is through a process of 'scaffolding'. The term was first used by Wood, Bruner, and Ross (1976), within the context of mother-child interactions, and has a central place in Vygotskian accounts, as we have seen. Scaffolding, when it comes to supporting group work, has not been developed (see Section 4, this paper) but may involve a host of things including adapting and structuring the group work context and the task. Third, it may also be helpful to think of the teacher as a *guide on the side, not a sage on the stage*. If we are serious about transferring control of learning (at least in some contexts) more to the children, then we need to consider how best to achieve this. It is important for the teacher to find time for observation of children. Fourth, the teacher also needs to structure lessons carefully to facilitate learning in groups. On the basis of our work to date, we recommend that all lessons that involve group-work should include briefing and debriefing to enhance reflection and help develop skills. The aim is to help pupils, as much as teachers, become meta-cognitively wise about group working. Underlying all these points is the notion that teachers must be enthusiastic about the use and benefits of group working. Minimally, the teacher serves as a model and support for group working. If teachers are ambivalent about their support, pupils will quickly recognise this, and undertake group work more for the teacher than for the group (Galton, 1990).

5.4. Tasks: preparing lessons and group work activities

We have argued that a social pedagogy of group work needs to consider the contributions of teacher and pupil, and the classroom context within which groups operate. But it will also need to address a fourth dimension: the nature of the group task or activity. Previous research would suggest that if effective learning is to take place the relationship between the task and the quality of group interaction is important (Bossert, Barnett, & Filby, 1985). This is especially important when such tasks have inherent ambiguity and carry high risk of failure (Doyle, 1986), since these conditions can give rise to insecurities among group members. Research suggests that whole class and individual learning contexts are most suited for teaching procedural knowledge but are less conducive to solving complex problems that require pupils to monitor and regulate their thinking (Good & Brophy, 1994). Yet designing tasks that encourage group work is difficult. It is important that the task is set up in a way that encourages all members to talk and work together, and does not actually encourage individual working.

One common assumption, which can hinder the development of group work, is the view that the demands of the curriculum mean there is no time for group work. This is an understandable concern, given the heavy demands in the UK and other countries on covering core aspects of the curriculum, and the way that mandatory subjects like literacy and numeracy dominate the working day. The pressures on teachers should not be underestimated, but the view that there is no time for group work can be a consequence of a view of group work as something different from, or marginal to, the pressures to cover main curriculum areas. In contrast, group work can be viewed in relation to the whole curriculum. As other papers in this volume show, there is great potential for group work in mathematics, literacy and science.

There is value in integrating group work into all curriculum areas. It needs to be part of the fabric of classroom life, not extra to it.

In summary, it is argued in this paper that a considered approach to the contextual and group based nature of classroom learning has been overlooked. Such an approach can be seen as part of the development of a 'social pedagogy' of classrooms and group work in particular. The approach is built around four main dimensions: the classroom context, interactions between children and pupil skills, the teacher's role, and the nature of group tasks and activities, and a strategic approach to their interrelationships. On the basis of this approach, developed over the year-long collaboration with teachers, referred to above, we have developed a group work programme, involving carefully designed activities in the context of key principles. This is now being systematically evaluated in schools at KS1 (5–7 years), KS2 (7–11 years) and KS3 (11–14 years).

6. Conclusions

We started this paper by citing Resnick's belief in two main features of a new pedagogy for the classroom—'knowledge based constructivism' and 'effort based learning'. We have suggested that a third feature that could be added. We have argued that there is a need to recognise the classroom contextual features that can influence learning and behaviour in schools, and, more specifically, we have argued for the benefits of group work. It is not suggested that group work should replace other contexts of learning; clearly there is place for teacher instruction and individual work. Rather we believe that group contexts for learning are educationally significant but neglected. High quality group work is a classroom contextual feature that can aid 'knowledge based constructivism' and 'effort based learning'. We have suggested that there is a need to construct a social pedagogy that can underpin the development of use of group work in schools, and in this paper we have set out a framework, which is being used in the design of an intervention currently being evaluated.

We end by noting that group work and co-learning may well become more important in the future. The classroom of the future is often portrayed in terms of a sterile shiny floor space with impressive futuristic hardware, or in terms of individual learners at a computer connected at a distance to electronic forms of information. Pervasive as these images are they miss an essential feature of what learning is about—which is likely to be as true for the future as it is now—that is, the interactions and relationships within which learning takes place. In the future, the distinction between teacher and pupil, or expert and novice, may well become blurred, especially as information becomes more widely and instantly available. But learning is not just about information. The classroom of the future, and the pedagogy relevant to it, may be more about co-learners—that is, pupils learning from and with each other, and making sense of the information available to us all.

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