

Teaching and Learning | RESEARCH BRIEFING

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Improving pupil group work in classrooms: A new approach to increasing engagement and learning in everyday classroom settings at Key Stages 1, 2 and 3

There is a wide gap between the potential of group work and its limited use in schools. Groups in classrooms are often formed without a strategic view of their purpose, and teachers and pupils have concerns about group work. This project developed principles and strategies to improve the quantity and effectiveness of group work in classes at Key Stages 1, 2 and 3. It evaluated the programme through a year-long intervention study, and assessed the applications of group work.

In contrast to views that group work may interfere with learning in mainstream curriculum areas, teachers successfully implemented effective group work in primary and secondary classrooms and across the curriculum.



Offering teachers and schools a package of practical relational strategies, based on key principles, and support for setting up, managing and improving the effectiveness of group work is a successful approach to the integration of group work in everyday classroom settings.

Involvement in the SPRinG project had positive effects on pupils' academic progress and higher conceptual learning.



Despite some views that group work is only beneficial for children's social development, we showed that group work can more positively influence academic progress than other forms of teaching and learning.

Involvement in the SPRinG project had positive effects on pupil behaviour through increases in active on-task interactions, more equal participation in learning, sustained interactions and higher level discussions.



Involving pupils in group skills training, and using group work alongside other forms of teaching and learning, can raise the levels of engagement in learning, encourage children to become more actively engaged in the learning process and facilitate more thoughtful learning processes.

Personal relationships between teachers and the class and between pupils within the class improve, provided teachers take time to train pupils in the skills of group working.



This suggests an alternative to the current approach to school discipline, where the trend is to concentrate on whole-school managerial solutions designed to control rather than eliminate the problem.

The research

The benefits or disadvantages of various group-work practices have aroused much comment. A central justification for this study was that both debate and policy on grouping in this country were uninformed by a sound empirical research base. Our earlier research has shown that little group work takes place in UK schools, and still less is of good quality. Pupils may sit in groups, but they rarely interact and work as groups. Groups in classrooms are often formed without a strategic view of their purpose. Even though some tasks may be assigned to groups of pupils, there is little support for pupil-pupil interactions within groups to make learning effective. Pupils are rarely trained for group work, while teachers have doubts about, and lack effective strategies for setting up and managing, group work in classrooms. Instead, pupils work individually or as a whole class, and thus find themselves in an environment that often allows them to be distracted by social talk.

Previous research indicates that there can be positive learning and social effects of cooperative group work. But this research was short-term and did not provide teachers with the basis for adopting group work for everyday classroom life. The SPRinG (Social Pedagogic Research into Group work) project is distinctive in providing a general programme that applies group work across the curriculum, over the school year, and when a range of learning tasks may be undertaken simultaneously. The main impetus for the SPRinG project was to build on our earlier descriptive research and address the wide gap between the potential of group work and its limited use in schools.

To overcome this gap a new approach to conceptualising group work in classrooms was needed in order to integrate group work into the fabric of the school day. We therefore embarked on an ambitious project in which we worked with teachers to develop a programme of group work that could be successfully integrated into school life. This programme was then systematically evaluated by examining pupil progress over a full school year, and in comparison to a control group in terms of attainment, motivation for group working, and within-group interactions. The project also explored applications of group work to contexts known to cause problems for teachers. It aims to disseminate its results widely.

The project devised approaches that together covered education from 5 to 14 years. The research on Key Stage 1, 5–7 years, took place at the University of Brighton, on Key Stage 2, 7–11 years, at the Institute of Education in London, and on Key Stage 3, 11–14 years, at the University of Cambridge. The project had three main stages.

The development stage. This included a year-long collaboration between the research

teams and groups of teachers, involving regular meetings, evaluation of activities by teachers and pupils, discussion of emerging principles and practices concerning effective group work, and researcher feedback. The resulting SPRinG programme was built around three key principles:

- A relational approach which assumes that group-work skills have to be developed. We cannot just put children into groups and expect them to work well together, particularly when adults can also find it difficult to work with others. It is well known that pupils need to have the skills to communicate effectively through listening, explaining and sharing ideas. But pupils also have to learn to trust and respect each other, and they need skills in how to plan, organise and evaluate their group work. The project stresses supportive relationships between pupils, and between teachers and pupils. A key aim is the development of pupil independence, and the need to address difficulties between pupils that can lie below the surface and inhibit classroom learning.
- The role of teachers in group work. A major part of the programme is the need to develop strategies with teachers likely to lead to high-quality, thoughtful group work. These strategies need to allow teachers the freedom to adapt grouping practices for different purposes and learning tasks. Adults need to support and guide groups, and monitor their progress, in ways that encourage independence rather than directly teaching pupils.
- Creating the classroom context for group work. Our approach rests on the view that to be successful, group work must be integrated into overall classroom organisation and management. This includes three main elements. The first is the combination of classroom and class size and seating arrangements in the classroom. Second are the characteristics of groups such as their size, frequency, composition and stability over time. Third are the group-work activities, lessons

involving group work, and the curriculum. The teacher has a key role in organising these in a strategic way to help effective group work for learning.

These, along with activities for developing pupils' group-work skills, were set out in a Handbook for teachers, one at each site. Teachers responded positively to involvement and contributed greatly to the development of the Handbooks. Valuable lessons were learned during the development phase about group composition, stability and size, classroom layout and seating arrangements, group-work training for pupils and ways in which teachers can encourage and evaluate group work. This experience led to the further refining of the Handbooks produced at each Key Stage. These have been widely appreciated, and demand for them in the UK and overseas is growing.

Evaluation stage. The main aim of this stage was to test the effectiveness of the SPRinG approach by comparing pupils trained with the SPRinG programme with pupils who were not. The main research question was whether the group-work programme led to increases in learning and attainment, more 'favourable' motivational patterns and attitudes to learning, and behavioural and dialogue patterns supportive of learning. The study involved an intervention over a longer time frame than many such studies, taking a full school year,

		Classes	Pupils
KS1	SPRinG	19	474
	Comparison	18	506
KS2	SPRinG	32	849
	Comparison	40	1027
KS3	SPRinG	53	1403

rather than being performed just before and after the usual brief intervention period.

The nature of comparison groups varied at each Key Stage but were designed to be a valid test of the effect of the intervention (and not just increased attention), for example at Key Stage 2 they were involved in a parallel project on peer relations, while at Key Stage

Summary of results

- Despite teachers' concerns that group work might hinder the coverage of mainstream curriculum areas, there was evidence that involvement in SPRinG had positive effects on pupils' academic progress in comparison to usual classroom practices. At KS1 benefits were seen in reading and mathematics (effect sizes ranged from 0.22 to 0.62). At KS2 group work seemed to benefit all types of knowledge but especially conceptual understanding and inferential thinking (effect sizes ranged from 0.21 to 0.58). At KS3 the success of group work depended on the type of topic, but appeared to benefit higher cognitive understanding.
- Involvement in SPRinG led to more, and better quality, involvement in group work, less individual work, and more activity on task interactions in groups. Interactions were more likely to be sustained and at a high level, relative to comparison pupils.
- In line with programme aims, SPRinG teachers were more likely to monitor interactions between pupils and less likely to engage in direct teaching. Pupils in SPRinG classes engaged in more autonomous learning in groups.
- Results on pupil attitudes and motivation to group work were less clear-cut. There was a suggestion that involvement in SPRinG seemed to arrest deterioration in attitudes to group work and school subjects. At KS1, pupils showed increasing preferences for paired and small group-work over individual work. Further analysis, especially at KS3, is proving to be insightful in showing how attitudes to group work can vary in a systematic way between different groups of pupils.

3 pupils were compared with themselves in group-work and non-group-work situations. Data collection varied somewhat between sites due to the age of pupils and classroom and school circumstances, but at all sites pupils were assessed in terms of three outcomes:

- Academic and learning measures covered both general attainment and specific measures more directly connected to experiences of group work.
- Motivational and attitudinal measures at each Key Stage came from pupil self-completed questionnaires involving rated items which, when added, formed a number of scales.
- Classroom behaviour measures at each Key Stage came from systematic observations of pupil behaviour and interactions when with other children, with the teacher and when working alone under normal classroom conditions. The schedule was based on those used in previous research by the directors and further developed systematic observation for descriptive and evaluation purposes in educational research. At Key Stages 1 and 2, videotapes were made of group work in experimental and comparison classes to allow fine-grained analyses of group discourse and group interaction processes.

Applications stage. The purpose of this stage was to apply group work to contexts which are known to be problematic. Project data are providing insights into the processes involved in developing, applying and strengthening the use of group work in schools.

- Whole-school approaches. While our earlier work demonstrated the effectiveness of group work for pupils when the SPRinG team worked directly with teachers, there was no guarantee of success when schools took on and developed the initiative themselves. Moreover, some teachers did not implement group work in as full a way as others, and this seemed to be more likely when they were working on an individual basis in their schools, not supported by colleagues. A main emphasis in primary schools (i.e. at KS1 and 2) was on developing and sustaining whole-school approaches to group work.
- Inclusion. Schools with high levels of SEN pupils, poverty, EAL (English as an additional language) and mobile populations can be seen as particularly problematic as they frequently withdraw from initiatives such as group work in favour of individual work and whole-class teaching. One team worked with teachers to explore ways of adapting the group work programme to facilitate inclusion of children with special educational needs and another focused on the sustainability of SPRinG in schools in such difficult circumstances.

Major implications

We claim that this study has the potential to make a considerable impact on contemporary educational policy and practice of the kind envisaged in the original TLRP concept. This is the first study of group work in the UK to show positive attainment gains in comparison to other forms of classroom pedagogy under normal classroom conditions. Further, despite common views to the contrary, group work can be successfully used and implemented into everyday primary and secondary school classrooms. Personal relationships between teachers and the class and between pupils within the class improve, provided teachers take time to train pupils in the skills of group working. Effective group work has important implications for the current concerns about school discipline where the trend is to concentrate on whole-school managerial solutions designed to control rather than eliminate the problem.

The success of the SPRinG project depended on developing strategies for teacher involvement and professional development likely to lead to high-quality, thoughtful, and sustained implementation. There were many spontaneous accounts from teachers of how pupils had improved and their own professional skills and confidence had been enhanced. It needs to be said that to be successful, teachers had to work hard on implementation of the strategies and skills training activities. But teachers consistently commented on how useful the Handbooks were, and how helpful they found the advice and activities they contained. They profited from the guidance we were able to offer them, and from the hard-won experiences of other teachers. It was quite clear that they would not have found acceptable a research manual that had not been tested and nurtured in classroom contexts and which did not relate to their immediate curricular and behavioural concerns. Sometimes the advice went against their better judgements, for example on persisting with groups of pupils who clashed. Teachers would not have been willing to accept our advice if the programme did not have credibility in their eyes.

We saw examples of how teaching repertoires were extended, and saw teachers developing their own alternatives to enhance group work recommendations. Teachers offered thoughtful and insightful evaluations of the effect of the group-work training on pupil-pupil interaction and support. There were unexpected benefits. As pupils demonstrated group-working

skills, teachers reported that they had been 'freed' from many of their ordinary procedural duties and they were now able to reflect on their teaching and think strategically about it. Pupils found new areas in which to apply their group-working skills, especially on the playground and in other spontaneous activities.

The SPRinG research shows that we need to rethink current pedagogical theories, which seem to favour teacher-led situations and individual work. There are three main contexts for learning in any classroom: teacher-led work, individual work and interactions between pupils. Observational studies of classrooms show many efforts by teachers to interact with groups in their classrooms, but very few opportunities for the development and use of interactions within groups. This has been exacerbated by current concerns with performance indicators and preparation for national tests. Pressures arising from the curriculum and the classroom context mean a heavy emphasis on whole-class teaching followed by individual work, with little room for group work. Other research indicates that teachers can feel unsatisfied with whole-class teaching, especially when they have a strong belief in the value of addressing the individual needs of pupils.

We argue that the third context for learning – peer based interactions, or 'co-learning' – has been neglected, certainly in the UK. Our research shows that peer-based group working can be a very productive part of classroom activity. We suggest that given space and time to develop pupils' group-working skills, teachers can bring about a transformation in the teaching and learning environment. It offers learning possibilities for pupils not provided by either teacher-led or individual work, and can contribute to national concerns about attitudes to work and classroom behaviour. It is hoped that this project will help to put group work on the educational map. We also hope that this is the beginning of more systematic use of group work. It deserves to be given a much more central role in educational policy and school practice.

Further information

The SPRinG project is being disseminated and having impact on professional, user and academic audiences. At Brighton over 40 schools have applied for further training in the use of group work as part of the Working with Others programme, a continuation of SPRinG at KS1. Cambridge and London plan a series of conferences and workshops for local teachers and further newsletters which will be distributed nationally to all LEAs and schools. At KS1 and 2, manuals are being integrated into one overriding handbook for primary schools. Cambridge intends to make a video setting out the key results at Key Stage 3 based on the practice of the six most successful teachers in the study.

Work with teachers overseas has begun. SPRinG is part of a project in Hong Kong which attempts to introduce group work into reduced size classes (from 40 to 20 pupils), and is being used for the improvement of attainment and participation in the Caribbean. Similar extensions have begun with pre-school aged children in England and across continental Europe.

The SPRinG Project is also seeking to make an impact on policy, having been awarded a contract (along with Professor Judy Sebba of Sussex University) by the DfES to conduct a review of current research on grouping both as a part of school organisation and as a strategy to promote learning and social cohesion inside the classroom. The project, led by Professor Kutnick, will conduct a number of case studies and is expected to make recommendations by the end of the current year.

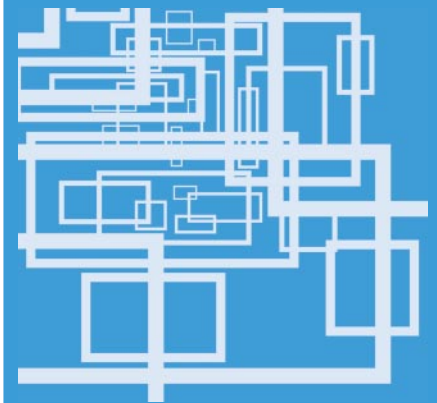
Further information and background to this research are reported in the *International Journal of Educational Research* (2003) vol. 39(1-2). The final report will shortly be available from www.esrcsocietytoday.ac.uk. A number of publications are planned including journal articles and a TLRP book in the Improving Learning series.

The warrant

The SPRinG project was designed from the outset to provide the highest level of evidence concerning group work in classrooms. The team has been active continually in addressing issues concerning the credibility of their findings. The SPRinG project aims to be strong empirically through close attention to the research design and choice of intervention and control groups, and to the reliability and validity of data collection; strong theoretically through the grounding, interrogation and extending of theories of co-learning and social pedagogy; strong in terms of user credibility through the close involvement of teachers throughout the project and through application of group work to 'authentic' classroom contexts; and cumulatively strong, in an internal sense, through the testing and integration of findings across the phases of the research, across sites and across age levels and stages of education.

Key features of the project's warrant are the contribution to validity of its findings and theoretical perspectives through the Scottish extension, and collaboration with colleagues from other countries in preparing the special edition of the IJER, which helped to provide an external accumulation of findings and analysis of group work in everyday classrooms. The early part of the project reinforced the need for a large-scale, authentic approach to the development of group work, and the later parts provided quantitative and qualitative evidence to ascertain the effects of group working on pupils in classrooms.

Teaching and Learning Research Programme



TLRP is the largest education research programme in the UK, and benefits from research teams and funding contributions from England, Northern Ireland, Scotland and Wales. Projects began in 2000 and will continue with dissemination and impact work extending through 2008/9.

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Enrichment: TLRP commits to user engagement at all stages of research. The Programme promotes research across disciplines, methodologies and sectors, and supports various forms of national and international co-operation and comparison.

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Improvement: TLRP develops the knowledge base on teaching and learning and collaborates with users to transform this into effective policy and practice in the UK.

TLRP is managed by the Economic and Social Research Council research mission is to advance knowledge and to promote its use to enhance the quality of life, develop policy and practice and strengthen economic competitiveness. ESRC is guided by principles of quality, relevance and independence.

SPRinG website: www.tlrp.org/proj/phase11/phase2a.html

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