

Case Study 9: Creativity Colleagues

Blackhall & Wardie Primary Schools, Edinburgh, City of Edinburgh

This case study describes how two colleagues have worked together to look at how to plan for greater opportunities to develop creative work across the curriculum with a particular emphasis on group and collaborative work.

Nurturing creativity in both staff and pupils is absolutely essential. We want thinking children who will grow to be thinking and innovative adults if both our society and industry are to continue to develop and change to meet the requirements of future generations.

Margaret Scot & Susan Gow, Headteachers,
Blackhall & Wardie primary schools

At a time of heightened awareness of the importance of creativity as a key element of the educational opportunities we provide to pupils and students it is interesting to find a situation that goes back several years and which lends itself to evaluation after sustained experience.

In my view creativity can be taught, but more important, it must be recognised and encouraged in a positive school environment. An important role for schools should be to nurture creativity. In their early years, children are inquisitive, have great imagination, and fantasies which are an important part of their play. They explore, ask questions, are unafraid of being ridiculed, have fun and are often creative in the process. Unfortunately as they grow older, creativity is considered of little importance and, at times, discouraged.

Margaret Scott, Headteacher, Blackhall Primary

Wardie and Blackhall primaries are located at the north-western side of Edinburgh and serve mixed catchment areas. The two schools also have connection through their headteachers since the head of Wardie was formerly the depute head at Blackhall. It was while at Blackhall that these two senior members of staff considered the need to inject greater opportunity for creative work into the experience of their pupils with a particular focus on problem solving across the curriculum areas. They also wanted to look more closely at the efficiency of group and collaborative working in the classroom and between members of staff in teaching teams.

I believe there are two types of thinking, analytical and divergent. Analytical thinking breaks things into a number of small ideas or narrow answers whereas divergent thinking develops many ideas and gives divergent views on possible solutions to problems. Children working on divergent problems with many possible solutions can come up with clever and sometimes unexpected responses. Most real-life problems are of the divergent type.

Margaret Scott, Headteacher, Blackhall Primary

Both members of staff were engaged in further professional study and both were well aware of developments in education that had changed the agenda of teaching approaches so that accountability for test results was dominating professional considerations. In their view, something of the creativity in teaching and learning was being lost. For them, this had taken the form of reduced professional discretion, allowed within a project or within centre of interest approaches for engaging children in real decision making and innovative thinking.

I felt that we lost something out of the creative side of learning and teaching with the passing of the centre of interest approach. Of course I saw the need for greater accountability and therefore of more prescription but I think we maybe threw the baby away with the bath water. I wanted to restore some of the excitement and innovation to our teaching and restore some confidence to teachers and pupils.

Margaret Scott

In an effort to put some of this dimension back into the experience of the children for whom they were responsible they explored the potential opportunities offered by an American scheme called 'Odyssey of the Mind'.

This scheme had come to the notice of both headteachers thanks to the school board chair who had recently moved from America. Contact with American airbase groups was followed with a study visit they made to Maryland in America to shadow Odyssey of the Mind organisers and take part in a conference.

The programme is built around principles of critical thinking, decision making, creative thinking and presentation skills. It comprises a range of activities including communication, teamwork, goal setting, project management and academic risk taking. The emphasis is on acquiring these skills whilst having fun, working in teams and striving to produce original and creative solutions to problems set within team challenges.

Under the guidance of a coach drawn from a pool of parents and teachers, groups of children work in teams of five to seven to devise solutions to problems. These are set as challenges that can involve several curricular aspects but which can also deal with a number of higher-order organisational and thinking skills. The challenges encourage the children to think creatively and independently and to develop skills such as team working, time management, evaluation of ideas, risk taking and communication. The challenges are time limited and when solutions are devised these have to be presented to the coach.

For the promoted team at Blackhall some five years ago this scheme seemed to offer a number of possibilities:

- advice, documentation and structure, which would avoid significant time-consuming preparation
- the availability of training materials
- the existence of a national and international dimension with competitions

between schools available in the UK

- a golden opportunity to enlist parents and carers as coaches to assist staff and so broaden the base of the adults involved and help parents to grasp the nature and importance of the skills and ideas behind the scheme.

The scheme was introduced to the school as an extra-curricular activity run one evening per week for about an hour. Primary 6 and Primary 7 pupils were involved in age-determined teams. Typically the sessions began with short problem-solving activities lasting six or seven minutes. These warm-up activities might include tasks such as 'Discuss and list as many uses for an umbrella as you can think of' or 'Using eight straws and the materials available in the resource box, create as large a structure as you can. You may not cut the straws but bending is permitted'. These activities last around five minutes or so each and the remainder of the evening session is spent working on a more involved task such as 'The Thursies'. (Members of the group must select objects placed in a bag by the coach to describe a fictional society called The Thursies to whom the objects belong.) Another longer task might be moving an uncooked egg one metre without any part of it coming into contact with the human body. Over the first few weeks the teams with their coaches work to a format that involves:

- Activity 1 – verbal problem (five minutes)
- Activity 2 – practical problem (five minutes)
- Activity 3 – longer problem selected from the scheme handbook (15 minutes); modification of the problem (up to five minutes)
- Activity 4 – tidy up
- Activity 5 – presentation by the team of their solution to longer problems – in subsequent weeks these presentations are made to other groups rather than the team coach.

The programme is run in early evenings over the winter months and during the last eight weeks the pupils are given a long-term problem to work on with a view to a presentation of findings before an audience of peers and parents. Pupils have to spend time brainstorming how the team proposes to tackle the problem. Having refined brainstorming lists the pupils must produce a 'must do' list of tasks and a 'might do' list of tasks. Following meetings are used to continue the process of referring to the problem, reflecting on and refining brainstorming and 'to do' lists, preparing for the presentation including the making of any props and aids. The final presentations are to the assembled parents on an evening set aside for this purpose.

In this scheme coaches are there to facilitate the children's efforts and not to provide answers that must be devised by the pupils. Coaches ensure that the teams 'time line' dates of meetings and events. They keep a running record of the team's progress each week, recording tasks overtaken and those that remain to be completed. The views of the coaches reflect the enthusiasm and discovery that the scheme engenders in both adults and children.

I took it on as a chore and subsequently really enjoyed it.

I could never be a teacher! I learned that if you give children their head

they will find their own way to answers. I was very proud of my group's achievements.

I kept reminding myself it was coaching and not leading. If the kids asked a question you had to turn it round so they actually worked on the answer themselves. You had to encourage them not to judge too quickly whether or not an idea would work.

I learned better self-control. It is important not to interfere but to let the children interpret for themselves. I found it hard to do this sometimes but I am glad that I did as the children were exceptionally creative and dynamic.

I really enjoyed it – great fun and a good experience for all involved.

The handbook like the training evening was a useful tool for the first few weeks. It gave structure to the nights and offered advice on solving problems. The children were excellent in learning to direct themselves as a team towards solving problems. It would be ideal if the secondary carried this on.

I'm a project manager and this approach is part of my everyday work. It is great that my children are getting this experience at their level – it can only benefit them into the future.

I am a new teacher to the school. This has been a great way for me to get to know children who are not in the stage which I teach.

The teams themselves are structured with clearly defined roles for each member with real responsibility for the tasks assigned to them. These are:

- Timekeeper – to ensure that deadlines for problems are met within the allotted timeframes
- Team leader – whose role it is to encourage the team to support one another, ensure the task is being addressed and that there is a solution at the end
- Delegator – who assigns responsibilities to different team members for carrying out various tasks which the team have decided are necessary to complete the problem solving successfully
- Resource investigator – who ensures that all the necessary materials are assembled
- Designer/artist – who designs articles and chooses suitable materials for the team to work with
- Presenter – the one who presents the team solutions to a wider audience.

Having established the need for the various roles the children allocate team members to the various functions. More than one child can perform the various roles so long as the duties are followed through. Teams decide on team names, badges and ways of operating. Coaches try to keep pupils on track to talk around problems and then collect individual and group ideas to generate solutions.

I think the children should be proud of what they achieved. Five individuals started and one team finished.

Parent coach

Pupils are reminded at every session once they have presented their solution that they must evaluate their work by considering the following questions.

- What have we learned this time?
- What skills have we developed?
- What skills so we require to develop more?
- How could we develop the technology of our solution?

Pupil reaction to the scheme is enthusiastic as these P6 comments reveal.

I think it was a great opportunity to share your ideas with other people.

There were lots of things I enjoyed. Seeing the performances of other groups, noticing people clapping for each one, working and helping my team mates and seeing the props and models which had taken so long to make – actually working!

I learnt to work as part of a team and to listen to other people's ideas as well as just considering my own.

If anyone trying it for the first time finds it boring at first – stay – because it is brilliant.

It is a fun-filled adventurous time and you'd be crazy to miss it – and you make lots of friends.

You have to go for it. It's fun and it helps with your problem solving in class.

I enjoyed the way I saw how other people think and that nobody was a winner because we all had good ideas.

Collaborative Groupwork

The staff at Blackhall and subsequently Wardie primary schools realised the benefits of the Odyssey of the Mind approaches in terms of higher-order thinking and organisation skills. It was not long before they sought to bring some of this thinking to bear on the day-to-day work in the classroom. Having already decided to collaborate in developing Odyssey of the Mind as a joint venture with pupils and parents, schools' management teams used devolved funding to second a staff member from each school for several days to look at how aspects of the OM approaches could impact on classroom working.

The focus for this work was collaborative groupwork and a concern to address the issue of some children viewing the teacher as the only resource within

their classrooms rather than seeing other resources and particularly their peers as important and valuable sources of knowledge. The secondees tried to identify the differences between the groupings used in classes and what might effectively build on the collaborative working that was having such an impact in Primary 6 and 7.

Collaborative groups

Positive interdependence: we sink or swim together.

Individual accountability: each person must master the material.

Teacher teaches social skills needed for successful group working.

Teacher monitors behaviour interventionally.

Feedback and discussion of children's behaviour.

Small groups

No interdependence. Children often work on their own, occasionally checking answers with others.

Hitchhiking. Some children let others do most or all the work.

Social skills not systematically taught.

Teacher works with other children and gives weight to peer pressure.

Little discussion of *how* the children worked together.

In looking carefully at what should be sought for effective group working the secondees categorised three groups of what they termed 'social skills'.

- Basic group skills
- Functioning skills
- Higher-order thinking skills (see Appendix 1)

In teaching these skills the secondees recommended a six-step process.

1. Define the skill in terms of what children can understand – be as explicit as possible.
2. Help the child to see the need for the skill – describe what happens when the skill is not used.
3. Let the children describe the skill – using charts.
4. Practise the skill whenever possible.
5. Discuss and reinforce the children's efforts and improvements.
6. Practise the skill as often as needed – be alert to when children seem to be forgetting it.

The guidelines document goes on to identify appropriate skills, activities and experiences for the early, middle and upper stages of the primary school.

I hope we are building attitudes which will help our children to manipulate their knowledge, draw on their experience and come up with practical and original ideas to address any problems which they

may face. The climate in which they do this has to be non-threatening and encourage brainstorming. Our guidelines document tries to identify for staff how they might go about this by breaking things into stages and identifying activities. I hope we can encourage colleagues to give children the opportunities to regularly engage in appropriate activities and so gain confidence to adopt this way of thinking and working as a matter of course.

Wendy Young, teacher seconded to write guidelines

The imaginative approach to nurturing creativity and innovation in learning and teaching has had a significant impact over time. The development of the Odyssey of the Mind principles into an analysis and development of collaborative group working as part of the wider curriculum will require more time for evaluation but the signs are that it will bring long-term benefits for pupils.

The group coaching and challenge sessions coupled with the developments in collaborative group work are having tangible effects on the way children approach tasks and their attitudes to learning. I think there is a particular improvement in the attitude of boys in terms of being more collaborative and less combative in their general demeanour.

Susan Gow, Headteacher, Wardie Primary

In responding to a possible consideration that this way of working might bring behaviour and disruption issues for a class teacher one member of staff replied:

Children here have smart ideas and creative thoughts. The high levels of interaction and problem solving in the Odyssey and collaborative groupwork has translated to the way we look at things within the 5–14 structures. It is making us think more about just how much children can contribute to their own learning and that of others.

Karen Gardner, AHT Wardie PS

Management has also reflected on some of the implications for giving more focus to this type of working.

We need to be looking more at the kind of focus we give to creativity and innovation in both learning and teaching. It will certainly mean reconsideration of things like how we allocate teaching time and also how we facilitate as opposed to deliver learning. I think there are implications here for both pre- and in-service training.

Margaret Scott & Susan Gow, Headteachers, Blackhall & Wardie primaries

We must realise that more and more organisations are spending money to ensure that their top people are trained in the basic skills associated with creative problem solving, team work, communication, inventiveness and initiative. These skills help them to stay ahead of the competition. Our Odyssey of the Mind workshops and our moves to put

the Odyssey of the Mind principles into our group working go some way to addressing these issues at a time when children are very receptive. It can only be an investment for the future and one which should begin early and be developed throughout the education system.

Margaret Scott & Susan Gow

The developments at Blackhall and Wardie primary schools offer some interesting insights into factors conducive to promoting creativity.

- Pupils have planned formal and informal opportunities to develop and apply creativity.
- Pupils are expected to use higher-order skills that they have been taught.
- Opportunities exist for pupils to apply creativity outside normal lessons.
- Pupils take the initiative in applying creativity to tasks and value the opportunities that they receive.
- Pupils and staff are motivated and are encouraged to explore a range of ideas, consider their quality and apply solutions accordingly.
- A climate of enthusiasm and pleasure in learning is engendered and valued.
- Teaching is non-threatening and positive with acknowledgement that confidence to participate and the acceptability of making mistakes are important elements of effective learning and teaching.
- Opportunities for display and presentation are frequent with demonstrated value for the contributions of pupils, parents and staff.
- Time is prioritised in the curriculum for discussion and practical problem solving.
- Programmes of study have been evolved that show planned progression in the skills associated with creativity and also continuity in terms of opportunities to apply these skills.
- The staff and overall policies of the schools involved demonstrate commitment to developing creativity.
- Management is committed to supporting and funding developments.
- Systems are in place for monitoring the implementation and effectiveness of strategies.
- Staff provide good role models for pupils, particularly with regard to team working.
- Developments are reinforced with the involvement of parents and the wider community.

Appendix 1: Social Skills

Children need help to learn the social skills that they will require to work with others. These social skills can be divided into three kinds. The lists below give examples of the essential skills in each category.

Basic group skills: without these the group will be unable to get anything done.

- Getting into your group quickly and quietly.
- Bringing necessary materials with you.
- Staying with your group until the task is done.
- Talking in quiet voices.
- Listening to your partner(s).
- Calling your partner(s) by name.
- Knowing your task(s).

Functioning skills: these enable group members to work together effectively so that the group task can be accomplished and group members undertake the appropriate learning.

- Taking turns.
- Contributing your ideas.
- Supporting your point with evidence.
- Asking for help when you need it.
- Encouraging others to contribute.
- Complimenting others on their contributions.
- Checking for understanding.
- Keeping the group focused and on task.

Higher-order thinking skills: these deepen group members' understanding of the material being learned and the points of view of other children.

- Asking for clarification.
- Providing clarification.
- Building on another person's ideas.
- Paraphrasing another person's idea to show that you understand it.
- Analysing your group's process.
- Coming to consensus.
- Synthesising several ideas.
- Evaluating the group's work.
- Criticising the idea, not the person who presented it.