

## Cooperative Learning: Sharing experiences of training and implementation into the classroom.

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### Introduction

This paper has been written by two practising secondary school teachers at Fallibroome High School in Macclesfield, England. Teresa Rice (Mathematics) and Andy Jones (Design and Technology) have been experimenting with Co-operative Learning in their classrooms for over 3 years.

In this paper we intend to discuss our experiences with Co-operative Learning, specifically Dr Spencer Kagan's 'Cooperative Learning Structures'. We will outline how the concept has been introduced to our school and how we as staff were trained. We also hope to discuss both our successes with Co-operative Learning and things that we hope to do differently in the future. We will start by briefly discussing what Co-operative Learning actually is.

*More information about our individual teaching experience can be found in our biographies at the end of this submission.*

### What is Co-operative Learning?

The philosophy behind Cooperative Learning is to ensure that children, when working in groups, have equal participation and are individually accountable for their own learning. Cooperative Learning provides pupils with **structures** to work efficiently as part of a team, avoiding the common pitfalls associated with group work. The purpose of cooperative learning is twofold, firstly to encourage pupils to take responsibility for their own learning and secondly to enhance pupils' social awareness and social interaction skills whilst delivering curriculum content.

In practice, Dr Spencer Kagan's Cooperative 'Structures' can be adopted to make teaching and learning more efficient. Pupils interact with each other efficiently creating an improved climate for learning. More pupils are on task at any one time, compared with traditional classroom management, reducing

the potential for disruptive behaviour and therefore avoiding lost learning opportunities.

Kagan refers to three types of teachers:

**Teacher A:**

Traditional 'chalk and talk' with a hand up response to whole class questioning.

**Teacher B:**

Ask pupils to work in groups completing a task with no structure.

**Teacher C:**

Pupils work in groups and are given a structure to complete a task.

In our experience we have concluded that there is a place and a time for teacher A and C in lessons. However, if a class is consistently operated following the same style of delivery and instruction the following issues can arise:

**Teacher A:**

Consider how many pupils are left frustrated with their hand in the air when a teacher picks on just one pupil to respond to a question. What is the reaction of those frustrated pupils when a pupil gets the answer right? Are they happy for the pupil? Are they not secretly willing the pupil to get the answer wrong? Is there a possibility that pupils wish each other to fail so that they can then be selected to answer?

Key points:

Creates a climate of negative feeling between pupils.

There is no way of ensuring equal participation.

Pupils can opt out of learning.

**Teacher B:**

Dr Spencer Kagan considers this the least effective style of teaching, despite its popularity in education in recent years.

Why?:

There is no way of ensuring equal participation

Pupils are not given the skills to work in teams; rather they are left to fend for themselves.

'Hogs' or 'logs' can develop within teams. Pupils may dominate the group to the detriment of others or choose to opt out of learning altogether.

If **Teacher C** operates a class, using structures, Kagan reports that PIES\* are present:

**Positive interaction.**

*When one pupil is successful the whole team benefits.  
Each pupil must contribute for the team to be successful.*

**Individual accountability.**

*Pupils have to prove their participation in the activity.  
Pupils cannot opt out of an activity.*

**Equal participation**

*All pupils are required to share the work.*

**Simultaneous interaction.**

*100% of pupils are on task.*

\*For more information about PIES visit:

[www.kaganonline.com/KaganClub/FreeArticles/ASK28.html](http://www.kaganonline.com/KaganClub/FreeArticles/ASK28.html)

A cooperative structure provides pupils with opportunities to learn and practise social skills, i.e. turn taking, sharing, listening and communicating effectively. Pupils can therefore access what is frequently described as the 'Hidden Curriculum'.

**An Example of a Cooperative Learning structure:**

Kagan has created approximately 300 cooperative learning structures. To be truly cooperative an activity must include the 4 criteria mentioned above (PIES). Here is a structure we frequently use:

**Numbered Heads Together**

The steps are:

Pupils are organised in to groups of four, each have a number (1-4)

The teacher poses a question.

Pupils engage in think time.

Teacher then asks the pupils to write down their answer.

Teams then discuss and compare answers, agreeing on a group answer.

Teacher randomly selects number.

Pupil with the selected number is called to give a full response to the question.

Teacher/pupils praise or coach, depending on responses.

*How many of the pupils in a class were actively engaged in this structure?*

*Were there any opportunities for pupils to opt out of the task?*

*Could the team succeed without the involvement of each pupil?*

### **Staff Training**

In September of 2003 the school asked for volunteers from each department to join a group that would meet once a month after school. Dubbed 'Lead Learners' they were given INSET on Cooperative Learning by two practising primary school teachers, Gavin Clowes and Elaine Brown from our Network Learning Community, who had been given previous exposure to Cooperative Learning.

Gavin and Elaine had attended training facilitated by Dr Spencer Kagan in America. This was made possible though the Network Learning Community funding.

As Lead Learners, we were encouraged to go back to the classroom and experiment delivering a few different co-operative structures. Gavin and Elaine gave extra support through joint planning sessions and lesson observations. As we gained confidence, we were able to disseminate cooperative ideas to our departments during the first year of our training.

In the summer term of 2004, April – June, we delivered INSET to other schools in our region. This helped develop our understanding of Cooperative Learning and its effectiveness further.

In July of 2004 after just over a year of exposure to Cooperative Learning we applied to attend a five day course in Florida. The 'Summer Academy' hosted by the Kagan Institute was an opportunity to learn how to use the structures effectively.

By the end of the year all staff had received training and experience of about 10 key Cooperative Structures:

*Numbered Heads Together*

*Rally Coach*

*Pairs Check*

*Find the Fib*

*Rally Robin*

*Round Table*

*Find Someone Who*

*Quiz Quiz Trade*

*Roving Reporter*

*Team Stand and Share*

During the Academic year 2004/5 Fallibroome School hosted monthly after school sessions for teachers from any of our feeder primary schools and other

secondary schools in the area. This was enormously successful and was attended by new staff and staff experienced in Cooperative Learning. Each session ran for 45 minutes and included experience of a new structure as well as ideas for brain breaks and teambuilding activities. To support teachers within our network, we, in our role of Lead Learners within the Network, have produced a range of support material including posters to be displayed in classrooms as well as an interactive website hosting a range of information about the structures and a forum where staff could post and answer questions.

The reason for the success of Cooperative Learning within our learning community was due, in no small part, to the structure in which it was introduced. First, by getting on board 'enthusiastic volunteers' who were classroom teachers to be Lead Learners and then using them as ambassadors for the project, the introduction of the new approach was more effective than a top down model of disseminating this information. As more and more teaching staff got involved a tipping point was reached where the majority of staff had accepted the concept and had experienced success in delivering it. It was only then that any expectation was put on staff via their Heads of Department, to include Cooperative Learning in their everyday teaching.

### **Our Experiences Of Cooperative Learning In Our Classrooms.**

#### **Planning Lessons**

Cooperative learning has made planning effective, fun lessons a lot easier. After deciding the content of a lesson and defining the learning objectives it is simply a case of matching a Cooperative Structure with the content to make an activity.

Structure + Content = Activity

After only a relatively short amount of time exposed to Cooperative Learning we were able to build up a bank of 'structures' that could be called on at any time to help us deliver content. The wide variety of different tasks that the structures include ensure that pupils are kept engaged in lessons; initially through the novelty of taking part in new activities and then, as you foster with them the will to learn, they remain engaged, by buying into the subject. The variety of different structures also allows us to target many different learning styles in any one lesson.

The choice of Structure to deliver content is not arbitrary. There are different structures to cater for different learning outcomes. Some Structures cater for learning and revising subject knowledge. Other Structures are designed for information sharing amongst pupils, idea generation and class building activities.

Our own personal repertoire of Structures is constantly growing. More Structures are assimilated through discussions with colleagues and through our own research on the Internet and Cooperative Learning publications such as Kagan's 'Cooperative Learning' book (ISBN 1-879097-10-9). As a school Fallibroome encouraged staff to display posters of our most frequently used structures on classroom walls. These were there to aid both staff and pupils. Their introduction also helped achieve a consistent approach to Cooperative Learning across the school.

We consider the time invested in learning new structures as time effectively spent. The fact that any one structure can be used with almost any curriculum content means that the ten minute investment it takes to learn the structure can potentially supply many hours of repeated use in the classroom.

### **Pupils' Response**

Pupils' response to Cooperative learning has been very positive. After only a few lessons of exposure to the Structures the gains in terms of the hidden curriculum (social skills) start to become apparent. Pupils start to think and organise themselves as a team very quickly. Classroom management in terms of resource management becomes much less of an issue as the onus for the management of equipment is put onto the pupils to organise as a team. Where once, at the start of an activity, 30 pupils would descend upon the paper drawer or where one pupil would be charged with the painstakingly slow task of handing it out to the entire class, one member of each team can quickly collect equipment for their team.

The majority of pupils have responded well to the structured approach of discussions and other similar activities. The combination of the structures' ability to stop 'hogs' and 'logs', their insistence on equal participation, and the need for each member of the team to have their say, means pupils get more satisfaction from lessons. Allowing pupils to 'have their say' more often and have that 'say' listened and responded to is very empowering for pupils, especially lower ability students.

Increased interaction and discussion work with peers will of course not suit all students. In lessons we are often aware of the challenges facing pupils who do not interact well with other students. These students can reside at both ends of the spectrum. However, we have witnessed successes with both pupils who cannot interact socially with other students as a result of behaviour issues and with those students who are labelled 'quiet' or 'shy'. For pupils with behavioural issues the structures define a clear set of rules by which success can easily be measured. The pupils frequently labelled as 'loud' or 'disruptive' can be kept in check by the structures, which by their very nature address most of the causes of students' disruptive behaviour. Pupils with low self-esteem also benefit from the rules of the structure, allowing them to easily access activities and have their opinions heard and respected, as well as benefiting from the idea of working as a team. The team can act as a safety net. If called upon to answer a question in the class pupils are merely giving the team's answer to a question, creating a cushion. It is not the individual's

fault if a question is answered incorrectly, but the team's. It is not an individual's fault if they have not understood a task or not been able to complete an activity, but the team's.

Pupils quickly pick up the Structures during lessons. It does take time to introduce a new structure to a class, and walk teams through it, modelling it for the pupils. However, a consistent approach across the school means that often when introducing a structure pupils have used it with another colleague, the skills being transferable from subject to subject. The same structure can of course be used in subjects as diverse as Mathematics, Geography and Design Technology.

### **Sharing Good Practice**

Our Network's investment in Cooperative Learning has led to unprecedented levels of good practice being shared. The common language that has developed amongst staff about the different structures and learning styles has meant that colleagues from different curriculum areas, key stages and even schools have been able to work together to develop their teaching and learning skills.

### **Summary**

Our exposure to Cooperative Learning has overall been a positive one. It has given us a common language to share teaching ideas with colleagues, the ability to plan more interesting and effective lessons and a greater sense of satisfaction with our teaching. We frequently enjoy taking risks, experimenting with new ideas and from this risk taking we have been able to develop our own Cooperative Structures and lesson ideas. With risks comes the potential for failure. However, the ethos of experimentation that Cooperative Learning has left us with has meant that we no longer fear such failure. We openly enjoy our successes and learn from, but are not discouraged by, our failures.

For us Cooperative learning has not been a new idea that we have enjoyed trying, a fun diversion to break the monotony but the foundation on which we have built all of our lessons and intend to do so for the rest of our teaching careers. After experiencing the advantages of Cooperative Learning, despite some minor disadvantages, we can never foresee ourselves returning to being 'Teacher A'.

### **Author Biographies:**

Andy Jones has been teaching Design and Technology to student's aged 11-18 for 8 years and is currently Assistant Director of Learning for Design and Technology at Fallibroome High School. Following a BSc Degree in Product

Design Andy took a one year Post Graduate Certificate of Education in Design and Technology at Sheffield Hallam University. He has taught at schools in Sheffield, Basingstoke and Macclesfield.

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Teresa Rice has been a teaching Secondary Mathematics for 9 years. She was Head of Year for two years and is now Assistant Director of Learning for Mathematics. Following a BSc in Mathematics, Statistics and Computing at The University of Ulster at Jordanstown, Teresa undertook a PGCE in Mathematics at the University of Nottingham. She has taught in a variety of schools in Nottingham, Belfast and Manchester.

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After attending the 'Training for Trainers' Summer Academy in July 2006 we hope to continue to play a leading role in delivering INSET to our network of schools. We also look forward to the opportunity of delivering workshops at the European Learning Brain Expo in 2007.

### **References:**

*'Cooperative Learning' Dr Spencer Kagan*

[www.kaganonline.com](http://www.kaganonline.com)

*'From Lost Learning To Drivers of Attainment' Peter Rubery on*

[www.nscl.org.uk](http://www.nscl.org.uk)