

**The design and implementation of classroom
activities to teach 7-9 year old children argumentation
and listening skills**

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Cognitive Science Research Paper 580

February 2006

Abstract: We describe how we designed and implemented classroom activities to encourage 7-9 year old children to practice their collaborative argumentation and decision-making skills. We discuss how the activities provided children with a private space in which they could express and represent their own opinions before comparing it with that of their peer/s. Reasoning and argumentation skills were then used to resource the collaborative process of reaching a final, joint agreement. These activities were to prepare children for their use of a computer interface paradigm – Separate Control Of Shared Space (SCOSS) (see Kerawalla, Pearce, Yuill, Luckin and Harris; under review) , but can also be used independently. We illustrate how the use of physical classroom space, as well as spaces provided on paper, can be used effectively to encourage active participation in constructive argumentation and listening skills.

The aim of this paper is to describe how we designed and implemented classroom activities to encourage 7-9 year old children to practice their collaborative argumentation and decision-making skills. These activities were used in conjunction with ‘Talk Lessons’ previously conceptualised by Mercer and colleagues (e.g. 2000) and were designed specifically to prepare children for their use of a computer interface paradigm – Separate Control Of Shared Space (SCOSS) (see Kerawalla, Pearce, Yuill, Luckin and Harris; under review). This interface paradigm was designed to encourage pairs of children to participate in the process of collaborative discussion and argumentation whilst sharing a single computer. However, the lessons described below could also, in future, be used as stand-alone activities.

Briefly, the SCOSS paradigm differs from a single-user interface in that it gives each child (of a pair) simultaneous control of their own screen space, using their own mouse. Each child can manipulate elements in their own space toin th471.1()Je 4.7(l-1.11.8(e 6ederviti

(the researcher carried out one). The three lessons took place over two weeks and the children worked with the same partner throughout.

2.1 Lesson one

The first lesson was adapted from lesson plans previously developed and published by Mercer and colleagues and available freely for download from the internet.¹ Briefly, this involved activities that introduced children to the concept of rules and asked them to draw-up their own list of 'rules for talking' in their class. Examples of the rules were: listen to the person speaking, value everyone's opinion, do not interrupt, support your argument with reasons and try to agree at the end. This lesson was received well by both the children and their teachers.

The second and third lessons were designed by Kerawalla specifically to support the children's future use of the SCOSS paradigm in the forthcoming study.

2.2 Lesson two

The activities were designed to give children an opportunity to develop and practice the skills listed above. Children were assigned a partner who they worked with throughout this lesson and the next.

During the second lesson (see appendix A for lesson plan), children were asked to sit with their partner and were each given a piece of paper which they divided into half with a vertical line, with one half headed with the word 'good' and the other half headed with the word 'bad'. In the first activity, several types of weather were read out individually and after listening to each one the children were asked to think, *individually*, about whether to categorise that weather as 'good' or 'bad'. They then wrote the word under the heading of their choice. Initially they were given practice with the word 'snow' and advised that it could be good for snowballs, sledging and having fun, but could also be bad for drivers and because it makes pavements slippery. When the children had decided how they wanted to categorise the word, they then turned to their partner and compared opinions. They discussed these, following their rules for talking, and tried to resolve any disagreements. They were helped by the teacher and researcher. They then continued in the same way with other types of weather (e.g. sun, thunder and wind).

The second activity of this lesson followed the same format as the first, but with 'places' (e.g. hospital, burger restaurant and swimming pool) instead of types of weather. The children were asked to decide whether they thought the places were 'good' or 'bad'. Both of the activities were effective in allowing each child to express their opinion and discuss it with their partner.

2.2 Lesson three

The final lesson introduced more complex scenarios that required a deeper level of thought and rationalisation and included issues such as ‘attempting to save a dog that had fallen through the ice on a frozen pond’ (see appendix B for lesson plan). Similar to activity one, the children were asked to decide whether they were ‘good’ or ‘bad’ things to do. After each scenario had been written down, the children were asked to discuss their opinions as a class; to explain their opinions and to try and change the minds of their partner and their classmates. The teacher ensured the ‘rules for talking’ were followed.

Two of the teachers chose not to carry out the third task on paper but instead asked the children to stand at either end of the classroom, in two groups representing ‘good idea’ and ‘bad idea’ and the children encouraged each other to change groups by using explanations and listening skills. This was a further interesting use of separate spaces that required children to represent their opinion through their physical location. This activity was very lively and enjoyed immensely.

We have exemplified how the use of separate physical spaces, both on paper and within the classroom, can be used to encourage children to engage in lively discussion and argumentation to help develop their collaborative skills. The first activity involved writing an opinion in a space on a piece of paper and the second activity required children to physically stand in a specific location that represented their opinion. On both occasions, children were asked to give reasons for their decisions and, if necessary, to try to encourage their partner to agree with them. Both the paper-based activity and the group activity are real-life examples of how children can be encouraged to identify and practice the skills necessary for successful and constructive negotiation and exploration of a domain.

The SCOSS interface, as described above and that the children went on to use as part

Appendix A

Lesson: Representing and comparing simple opinions and reaching joint agreement within a pair.

Talking rules on display in front of class

Blank sheets of paper

Pens/pencils and ruler

For children to develop and practice skills in:

- making their own opinion explicit
- justifying their opinion
- comparing their own opinion with that of their partner
- listening to and respecting their partner's opinion
- using argumentation and explanation skills to reach a final joint agreement.

Tell the class that they are going to practise using the rules for talking that they agreed upon previously. They are going to do an activity first by themselves and then in pairs.

Activity one

Give each child a blank piece of paper.

Ask them to find a pen or pencil.

Ask them to draw a vertical line down the middle of their piece of paper. Head one column with the word 'good' and the other column with 'bad'.

Tell the children that you are going to read out some types of weather (see list one overleaf). On the piece of paper in front of them, they have 2 columns; one where they should write the weather that they think is good, and one where they should write the weather that they think is bad. You are going to give them some ideas about how to think about the different types of weather.

Read out first word- *snow*. Suggest that this could be good weather as it can be fun for snowballs and sledging, but it could also be bad weather as it makes the roads and pavements slippery for drivers and pedestrians.

So where do THEY think it should go, in the good OR the bad column? Ask them to try not to look at what others are doing and not to talk to the others about what they think.

Read out the rest of the words, giving suggestions for why they could be good or bad. Ask the children to write the word in ONE column.

- sunny
- warm
- rain
- frost
- thunder
- windy
- tornado

When this is finished, sit the children in pairs, with their bits of paper. Give them a second sheet of paper, divide into columns and headings as with the first sheet.

Ask them to look at which weather they have in same places and which ones are different-this must

Appendix B

Lesson: Representing and comparing opinions about complex scenarios and trying to reach joint agreement within a group.

This activity can be carried out as per those in lesson two. Alternatively, it could be carried out without these resources, as described below.

Talking rules on display in front of class

Blank sheets of paper

Pens/pencils and ruler

For children to develop and practice skills in:

- making their own opinion explicit
- justifying their opinion
- comparing their own opinion with that of others
- listening to and respecting other's opinions
- using argumentation and explanation skills to try to reach a final joint agreement.

Tell the class that they are going to practise using the rules for talking that they agreed upon previously. This time they will have more complicated things to think and talk about.

Either: introduce that they will be carrying it out on paper with their partner as before.

OR

Move all tables and chairs to the side of the room.

Either: ask the children to divide a piece of paper into two columns and head one with 'good thing to do', and the other column with 'bad thing to do'. Read out the

scenarios below and ask the children to write down where they think they should be categorised.

After each scenario has been read out, ask children to put up their hand if they think it was a 'good thing'-identify these children. Ask the children to put up their hand if they think it is a 'bad thing'-identify these children.

Ask one of the children who think it was 'good thing' to explain their reasoning and try to persuade another ch