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

Lucinda Kerawalla, Darren Pearce, Nicola Yuill, Rosemary Luckin and Amanda Harris.

IDEAs Lab, University of Sussex, Falmer, East Sussex, BN1 9QH.

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.

1. Introduction

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 to represent their own current understanding of the task. In this way, when both children agree, the elements in each space are identical and when they disagree the elements are different. Children can then use this representation of disagreement to resource further discussion to help them to reach a final joint agreement. This type of representation is not possible with interfaces designed for a single user, which children commonly share in their classrooms. Children therefore needed to learn and practice these skills so we designed and implemented lessons and activities that encouraged children to:

- make their own opinion explicit
- justify their opinion
- compare their own opinion with that of their partner or a group
- listen to and respect others' opinions
- use argumentation and explanation skills to reach a final joint agreement.

The primary school involved in these activities was taking part in research exploring children's use of the SCOSS paradigm. Four year 3 and 4 classes were involved. The school generously agreed that three periods (two hours each) over two weeks, usually set aside for teaching 'Personal, Social and Health Education', could be used to teach all of the children (not just those in the study) in all four classes about talking and collaboration skills. These complemented previous lessons that their teacher had carried out. All except one of these lessons were taught by the children's own teacher

(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 'useful' or 'not useful'. Both of the activities were effective in allowing each child to express their opinion, which often generated disagreements within pairs and this gave them several opportunities to practice constructive argumentation so as to reach a joint agreement.

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[1] http://anubis.open.ac.uk/thinking/downloads/Preparing_for_group_work.pdf

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.

3. Discussion

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 of a research study, essentially makes similar activities possible within a shared computer screen and in so doing it reflects real-life practices where differing opinions are put forward for discussion. Children went on to use such an interface as part of a study reported in Kerawalla et al (under review) where children's use of the SCOSS interface was compared with pairs using a single user interface. SCOSS was successful in giving each child an opportunity to participate in the task and also provided children with the opportunity to express and represent their opinions. These were then used to resource argumentation and the collaborative process of reaching a final, joint agreement.

References

Kerawalla, L., Pearce, D., Yuill, N., Luckin, R. and Harris, A. (under review), "I'm keeping those there, are you?" The role of a new user interface paradigm – Separate Control of Shared Space (SCOSS) – in the collaborative decision-making process. Computers and Education.

Mercer, N. (2000), *Words and Minds*, London and New York; Routledge.

Appendix A

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

Resources:

Talking rules on display in front of class

Blank sheets of paper

Pens/pencils and ruler

Objectives:

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.

Whole class introduction:

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

Whole class activity:

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

Pair activity:

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 <u>must</u> be emphasised. <u>What do they agree on and what do they disagree on?</u> Tell them that they have to agree on the placement of all words. They must use the rules of talk when discussing the words. Remind them what the rules are. They write down a single version on sheet two.

Walk around class checking on their use of rules and advising where appropriate. Try to use the rules yourself when talking to the children.

Plenary:

End this activity with a discussion of who they think was good at using the talking rules.

Activity 2

(this could be a separate lesson if required)

Class activity:

Ask the children to divide a piece of paper into two columns and head one column with 'very useful place' and the other column with 'not a very useful place'.

Read out the places in the list below, asking the children to write them in one column as before.

- Buckingham palace
- Brighton pier
- Supermarket
- Swimming pool
- Hospital
- Burger restaurant
- Fire station
- Bus stop

When this is finished, sit the children in pairs, with their pieces 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 be emphasised. What do they agree on and what do they disagree on a within their pair **and within the class**? Tell them that each pair has to decide on a single version. Discuss opinions within the class as a whole. They must use the rules of talk when discussing the words. Remind them what the rules are. They write down a single version on sheet two.

Walk around class checking on their use of rules and advising where appropriate. Try to use the rules yourself when talking to the children.

Plenary:

End this activity with a discussion of who they think was good at using the talking rules.

Appendix B

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

Resources:

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

Objectives:

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.

Whole class introduction:

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.

Whole class activity

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 child to change their mind.

This activity can be developed into a class discussion of the pros and cons of each scenario.

OR

Ask all children who think it is a 'good thing' to stand at one end of the room. Ask the remaining children to stand at the other end.

Then tell them that they have to try and all end up at one end of the room. Select individual children to give their opinions. As children change their mind they move to the appropriate end of the room.

Ensure all children adhere to the rules for talking.

- Trying to rescue a dog that has fallen through the ice on a frozen pond
- Sharing your play station with your friend
- Looking after your friend's pet when they are on holiday
- Telling a secret that you promised to keep
- Telling a fib
- Being friendly to everybody

Plenary:

Discuss the success of the activity in terms of adherence to rules for talking, changing of opinions and agreement.