

Using puppets in the classroom to get children talking about their ideas

Jane Maloney (Institute of Education, University of London), Brenda Keogh, Stuart Naylor (Millgate House), Brigid Downing, (Manchester Metropolitan University), Shirley Simon (Institute of Education, University of London)

The PUPPETS Project is a research project, funded by the Nuffield Foundation, which aims to promote engagement and talk in science lessons. Primary school teachers, working both with the Manchester Metropolitan University and the Institute of Education, University of London, have been using puppets as a stimulus in their classrooms to provide more opportunities for more productive talk in science lessons.

Despite some teachers' efforts to keep children quiet in the classroom we must remember that children do learn by talking, both to the teacher and to each other. Talking about their ideas helps them clarify their thinking and develops their reasoning skills (Mercer et al, 2004). Such skills are required for the analysis of data, interpretation of results and conceptual development. Unfortunately, this type of talk is frequently absent in science lessons (Newton et al, 1999) and time is limited for discussions. Various reasons may account for the lack of time devoted to children talking, including the limited knowledge of appropriate teaching methods (Osborne and Simon, 1996). The PUPPETS Project has been set up to help teachers develop teaching methods that generate learning conversations amongst children. This article describes some of the ways teachers have used puppets in the classroom during the first phase of the research.

In the pilot phase of the study, eight teachers used puppets in their classrooms to help us assess different ways puppets can be used to stimulate children's conversations. For example, Lisa, one of the Year 6 teachers, used puppets to set up a scenario where one puppet (Liam) disagreed with another puppet (Ruby). The context of this lesson was about how a streamline shape could enable penguins to move more easily in the water. Liam thought the shape of the penguin had nothing to do with how it could move in the water. On the other hand Ruby thought it did and she suggested a practical method to show that the shape did have an effect on the speed at which shapes move through water. The children had to discuss whose ideas they thought were right and how they could demonstrate their ideas. However, teachers can use any topic where the children have to talk about competing theories. For example, Ruby could suggest a method to separate soil particles of different sizes by filtering and Liam could suggest using sieves. The children would have to discuss and investigate the merits of both methods of separating the soil particles. Of course you do not *need* puppets to set up such a situation but the research so far suggest that it can motivate and stimulate children more successfully than other methods have done.

The teachers have noticed that their classes have become more animated when the puppets join in the lesson. The children want to talk to the puppet and hear what the puppet has to say. When children were asked what they thought about the puppets they said that lessons were 'more fun', lessons were 'more active and lively' and one child

reported that it 'inspired my imagination'. Teachers too find it fun. One teacher felt it allowed him to say 'silly' things to his Year 3 class. For example, when his class were investigating how the position of the sun appears to change in the day and had made the puppet's shadow shorter, the puppet told the children someone must have washed it to make it shrink! They tell him (the puppet) that the shadow couldn't have shrunk and they explain in words understandable to other children what has happened. The children do talk to the puppet as if it was a separate person to the teacher. They know it's the teacher talking yet they talk to the puppet 'like a new friend' or another pupil in the class. The puppets seem to allow children freedom to talk when they are not sure about things. They know the teacher knows the answer so why bother explaining? However, the puppet doesn't know so their explanations are fuller. Shy children have been encouraged to talk and teachers have been able to assess pupils' understanding more effectively.

Some of the larger puppets have hands like gloves so the teacher can make the puppet manipulate equipment and other resources. This is particularly helpful in sorting activities as the puppet is able to join in just like another child. If, for example, the children are sorting rocks on the basis of their characteristics the teacher can make the puppet move rocks from one group to another to promote further discussion. The puppet's actions can promote the children to justify their choice of groupings if the puppet disagrees with their classification. As they explain their ideas, the children can consider the validity of their claims or recognise possible flaws in their reasoning.

Another argument for using puppets in the classroom is they can be used by the teacher to mirror behaviours they want to promote. The puppet can model the way claims can be justified and reasons given for a point of view. There is no right or wrong way to use a puppet but teachers have found it valuable to give the puppet a distinct character. If the character is kept consistently by the teacher then children can be allowed to take over using the puppet as they already know what the puppet is like; they don't have to invent a new character. The puppets have been used with classes of all ages in Key Stage 1 and 2 and so far the only children who appeared not to respond so positively to the puppets have been the very able children. Why this might be so is a focus for the second phase of the research.

The most successful use of the puppets has been when the teacher has introduced the puppet slowly to the class and has developed a strong sense of identity for the puppet. Care was taken to retain the puppet's character even when not being used; they were given a seat to sit and watch the children at work or are given to a child to be looked after. It is crucial that the puppets talk to the children; puppets that listen to the children and 'whisper' to the teacher do not appear to work so well. An effective use of the puppet has been when the puppet introduces the lesson and then talks to small groups when the children are discussing their ideas.

The PUPPETS project is now in its second phase and includes teachers in their NQT year and those who are very experienced teachers. We are examining to what extent teachers' practice changes as a result of using puppets. From the findings we will be

developing guidelines on how puppets can be used in the classroom to further promote discussion and engagement in science. At present we can report that children of all ages in the primary school have enjoyed having the puppets in the classroom and they have provided an extra stimulus for the children to become engaged with the topic they are studying and this can apply to all areas of the curriculum.

References

- Low, J. and Matthew, K. (2000) Puppets and prose. *Science and Children*, 37, 8, 41-45.
- Mercer, N., Dawes, L., Wegerif, R. and Sams, C. (2004) Reasoning as a scientist: ways of helping children to use language to learn science. *British Educational Research Journal*, 30, 3, 359-377.
- Newton, P., Driver, R. and Osborne, J. (1999) The place of argumentation in the pedagogy of school science. *International Journal of Science Education*, 21, 5, 553-576.
- Osborne, J. and Simon. S. (1996) Primary Science: Past and Future Directions. *Studies in Science Education*, 27, 99-147.
- Solomon, J. (1998) About argument and discussion. *School Science Review*, 80 (291), 57-62.