



National Teacher Research Panel

engaging teacher expertise

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Can thinking skills offer a framework to support young children's comprehension in literacy?

Aims of the project

The study sought to explore the extent to which young children of 5/6 years of age could be encouraged to articulate their thinking and the way they perceive themselves as learners.

In particular the researcher aimed to investigate whether the use of thinking skills strategies within a Year 1 class could:

- improve the children's comprehension of literacy texts; and
- encourage a wider participation within the class members through speaking and listening.

Context

The research project was undertaken with one Year 1 class of 27 children of mixed ability with the parallel Y1 class acting as a control group. It took place in the Spring and Summer terms of 2002 in a large Merseyside Primary School.

Summary of main findings

Following the introduction of the thinking skills strategies it was found that:

- the children could learn how to take turns in a discussion and give feedback within a structured activity, but these skills needed to be taught explicitly, they were not simply picked up through the everyday activities in the classroom;
- young children, age 5 and 6, were able to compare and contrast characters in stories, identifying a range of characteristics through the odd one out strategy.
- using adults to scribe for young children enabled them to articulate their thoughts explicitly. The experience of trying to verbalise their thoughts was a two-way social process rather than a simple encoding of words.

Background

In October 1998, the Department for Education and Skills (DfES) commissioned a review and evaluation of research into thinking skills and related areas. This report written by Carol McGuinness (1999) highlighted core concepts underpinning the field. These included the belief that focusing on thinking skills in the classroom is important because it supports active cognitive processing which makes for better learning. It notes however that classrooms characterised by thinking skills approaches, such as talk and discussion and questions and questioning, need to be well managed and clearly focused on learning objectives.

The research was carried out in Park View Primary School, in the Metropolitan Borough of Knowsley in an area of economic and social need within the Merseyside conurbation. It is a large school with 500+ children on register. Over 66% of the school population are entitled to free school meals and the special needs register currently stands at 40%+ of the school roll. The children generally begin their school career with poor speaking and listening skills.

Teaching processes and strategies

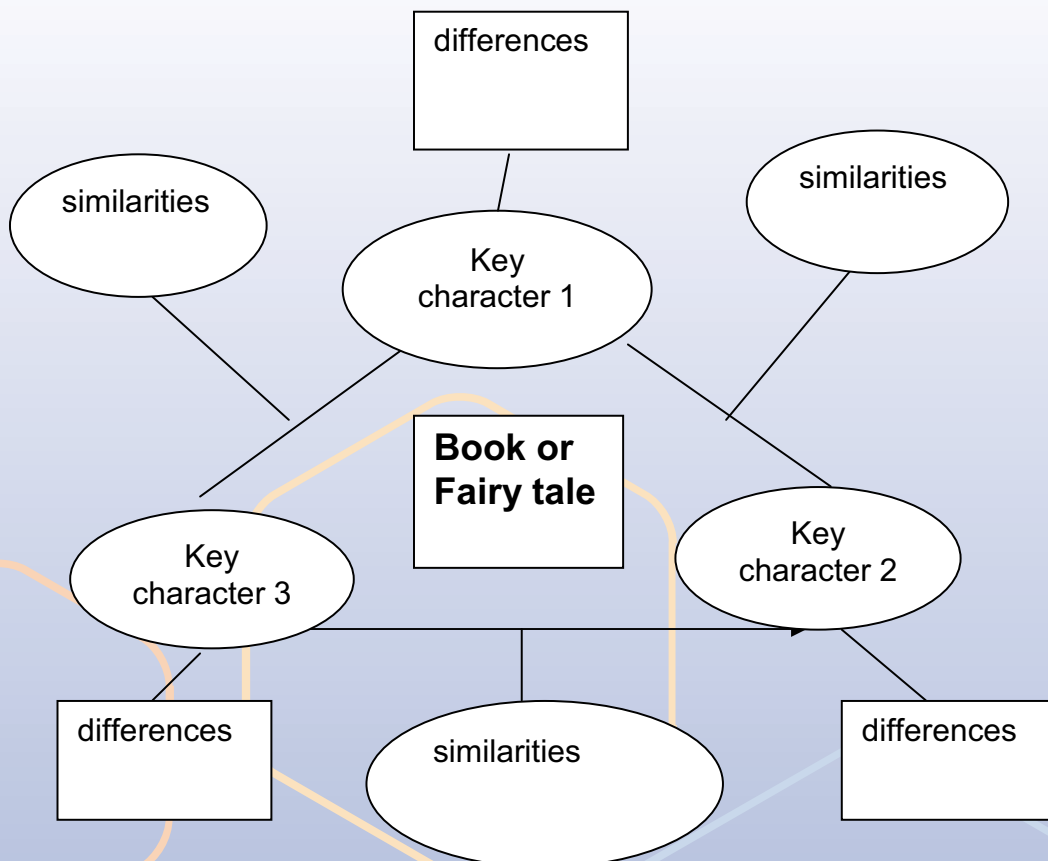
A pilot study was carried out to determine which of two thinking skills strategies might be most useful in achieving the following National Literacy Strategy objectives for Year 1, which are:

- describe story settings and incidents, relating them to their own experience and that of others (Reading comprehension, term 1, *5);
- identify and discuss a range of story themes, and to collect and compare (Term 2, *6); and
- identify and discuss characters, e.g. appearance, behaviour, qualities; to speculate how they might behave; to discuss how they are described in the text, and to compare characters from different stories or plays (Term 2, *8)

The first thinking skills strategy trialled was Community of Enquiry, following the Philosophy for children programme devised by Matthew Lipman. Using this method, the children shared a selected text by having the book read aloud to them. Then the children generated questions, arising from their understanding of that shared text. These questions were then used as a basis for a communal debate. Techniques such as evidence-based comments were encouraged, such as 'I agree with _____ because'.

The second strategy was the odd one out strategy, which is based on the skill of categorisation and comparison. It supports the understanding of the defining attributes of things (Higgins, S., Baumfield, V. and Leat, D., 2001). After reading a story aloud, three main characters were selected by the children. They then identified similarities and differences between the characters, first working in pairs and then sharing their ideas with the whole class ('think-pair-share').

Odd One Out Model for discussion



After the pilot phase, it was decided to use the odd one out strategy as this had produced a wider range of participation. It had also highlighted the need for training in Philosophy for Children for the teacher researcher, therefore Philosophy for Children became the basis of a subsequent research project.

The use of a preliminary character cognitive map gave the children experience in describing key characteristics about characters in the fairy story 'Hansel and Gretel'. In this story, whilst both the father and the witch were deemed to be bad, the father's extenuating circumstances were discussed in that 'he had been made to do it by his wife' and 'he was really sorry about what he had done.' After the pilot phase, ten sessions of odd one out were carried out during the Autumn term 2001 and spring term 2002. The parallel Y1 class followed its standard literacy teaching.

Findings

The biggest general change came in the categories of talking. The initial simple liking of talking developed into an understanding for some children that, through discussion, a deeper understanding of the shared story could be reached. Children felt that they had a right to be listened to by their peers and put their point of view. They didn't like it when others interrupted them.

There appeared to be a slight shift in the ability of the children to focus on the reasons why they liked the activity. During the second session, one of the children, a younger boy stated, 'It's hard thinking when all I want to do is play with the toys.' For this child, the statement represented a huge leap in his personal development.

Odd one out

Over the course of the ten sessions of odd one out, the children's responses did appear to cover a wider range of categories. During the first session, the children offered only a few similarities and differences based solely on the spellings of the characters' names, rather than their characters. This may well reflect the emphasis given to increasing their phonic knowledge during their time in Year 1 in order to boost their general levels of literacy but it poses a question as to how well the 'softer' text level objectives were being met. Without reducing the emphasis on phonics as a means of successful writing and reading, the later sessions were focussed on comprehension. The range of categories used by the children during the sessions form (figure 1 below).

Book/ session	Word-level	Physical character	Behaviour	Qualities	Actions	Cultural
1.Ruby	X					
2. Frighten-ed Fred		X	X	X		X
3. Not now,Bernard		X	X		X	
4.Willy the wimp	X	X	X		X	
5. Where the wild things are	X	X	X	X	X	X
6.The three little pigs		X	X	X	X	X
7. The sandbox	X	X	X	X	X	X
8. Mufaro's beautiful daughters		X	X	X	X	X
9. Jack and the beanstalk		X	X	X	X	X
10.Zoo			X	X	X	X

Figure 1: Range of categories used to describe characters.

Through participating in the odd one out sessions, the children had experience of listening to and understanding a broad range of classifying characters and events in the stories they heard. There appears to have been a shift in emphasis over the ten sessions towards the categorisations of behaviour, qualities and actions.

In the first session, using the book Ruby, two of the key characters are Ruby and Susie. The most common similarity was regarded as the /ee/ sound at the end of their names, yet in Jack and the Beanstalk, with key characters of Jack and the Giant, not one instance of a common similarity in the /j/ sound at the beginning of the names was recorded by the children. The focus moved to a deeper understanding of the role of the characters in the story rather than decoding aspects of the the characters' names.

Year 1 NfER-Nelson Progress in English 6 standardised assessment

As stated, the parallel Year 1 class cannot be directly compared as a control with the project class as the classes had not had pre-test assessments. They were also taught by different teachers with their own levels of expertise and interests. Nevertheless it is interesting to note that in terms of understanding of the whole text, the project class scored 32% as compared with the parallel class score of 22% and in terms of understanding language in context, i.e. retelling the story, the project class scored 24% as compared with 7%.

Other findings

Many of the children found it hard to record their thoughts. The use of an adult to scribe for them had an unexpected advantage. During the interviews with the teaching support assistants, a common theme arose. This was the enabling function of the adult in supporting the children in the process of articulating their thoughts so that others could understand. When the children couldn't articulate what they were thinking the support assistant then proposed a series of alternative ways of describing their thoughts for them. It appeared to be important that it was in this order, rather than the adult leading the thinking,

The language development of the children seems to have been enhanced by the odd one out project. The strategy made the children define their ideas and search for precise vocabulary. Their reasoning skills have been developed through listening to other people's reasoning being made explicit.

All children participated in the speaking and listening activities. One child with an emotional and behavioural problem benefited from having an adult as his co-worker in his pair. This arrangement highlighted specific areas for future work to support the child in the areas of receptive and expressive language to minimise his frustrations in school.

Research methods

Quantitative data

Odd one out

The responses given by the children during odd one out sessions were recorded by adult scribes as they worked in pairs or as a class. The reasons given by them for their choices of similarity or difference varied widely, indicating different levels of reasoning, but were codified according to 6 basic categories:

- word level / phonic-based
- physical characteristics
- qualities
- behaviour
- actions
- cultural aspects

These happen to be in line with the text level objectives in reading comprehension for term 2 in identifying and discussing characters. As the lessons involved all the class sharing their ideas the range of categories covered was recorded, rather than individual contributions.

In retrospect, it may have been better to have recorded the number of responses in each given category so as to determine if there were a shift in emphasis of the similarities and differences to qualities, behaviour and actions as opposed to word-level and physical characteristics.

Children's response to the lessons through PMI analysis

The PMI tool encouraged children to articulate their views on the positive (plus), the negative (minus) and the interesting aspects of our thinking skills sessions. This was one of Edward de Bono's critical thinking tools from the CoRT thinking programme (1987). The tool records comments made by the children in each of the categories of P (positive), M (minus) and I (interesting) responses to the sessions. There were 2 analyses made, one towards the beginning of the project and one at the end. The responses were categorised according to:

- Emotional response to activity
- Talking, including metacognitive aspects
- Creative responses
- Self as a learner
- Association
- Other issues

Year 1 NFER-Nelson Progress in English 6 standardised assessment

Year 1 children have been assessed during the summer term for the past two years using this assessment. The results for both Year 1 classes were compared. This however does not necessarily mean that any differences are due solely to the thinking skills sessions as both classes were taught by different teachers, although there is a common core curriculum for Year 1 in the school.

Qualitative data

- Field notes were made regularly in a learning log (teacher diary).
- Interviews were held with the teaching support assistants, who had recorded the children's comments.
- Video recordings were used to accurately observe the engagement of the children with the activity and to record the quality of the children's interactions with each other.

Conclusions

Thinking skills, in particular the odd one out strategy, can provide a framework to support young children's comprehension in Literacy. They can support young children in comparing and contrasting characters in stories, and exploring qualities, behaviour and actions. The skills of discussion and debate may not come naturally to young children and therefore they need to be taught explicitly. A range of opportunities, including paired work and whole class discussions, can offer a means of valuing the children's own reasoning and judgement. This type of approach can work with the youngest key stage 1 children and will serve as a basis for future work as the children mature. The adults working in the class can successfully model the act of refining descriptions for children through the process of scribing. This is a more complex process than simply recording utterances.

The thinking skills programme is currently being trialled with the reception classes, with a view to rolling it out to the rest of the school later this year(2004).

Suggestions for further reading

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