Southwood Middle School

Exploring the link between the health of Southwood's community and pupil thinking

This report describes the two enquiries undertaken at Southwood concerned with exploring the link between the health of Southwood's community and pupil thinking.

Having carried out two years' work based around the ALPS approach and learning styles, and with that now being embedded across the school, the SIG felt that it was time to identify a new focus for inquiry. After much discussion, it was clear that there were two areas of interest that people wanted to pursue. Therefore, three members of the group focused on looking at the environment of the school and the impact that it has on the children and their learning whilst two members looked at the development of pupils' thinking skills through effective talk as their focus of inquiry.

Inquiry A – Thinking Skills and Effective Talk

Context:
One member of the group had been involved in a 'Thinking Together' project with the Open University which involved using exploratory talk to solve mathematical problems using SMILE software. The teacher who was involved in this was extremely enthusiastic about the results.

She observed that in her maths group, when children were solving problems, there was normally only disputational and cumulative talk. By putting the children into groups of three, establishing what effective talk was and deciding upon the ground rules for talk, children entered into exploratory talk. This meant that the children engaged critically but constructively with each others' ideas and were able to reach agreement at each stage before progressing. The teacher involved saw that this had an impact beyond the project – children were able to talk more effectively and were able to solve other mathematical problems when back in the classroom.

This new inquiry is concerned with investigating whether exploratory talk could be developed in Science; it is a work in progress. It was observed that in Science AT1, when children were working in small groups on an investigation and making decisions about how to approach it, that time was wasted on disagreements between group members and it was usually the stronger, most vociferous children's ideas that were adopted by the group.

The inquiry plan:

There was a three phase time line. The inquiry initially involved mixed ability classes, one from Year 5 and one Year 6. These were the children the two SIG members were teaching at the time.

- Phase one – **completed**. Carrying out background reading on different types of talk and different types of thinking; observing children in two classes solving problems in Science; finding out how the children view problem solving and what they understand by being able to talk effectively. Analyse findings.

- Phase two – **underway**. Carrying out lessons on raising children's awareness of talk and how to conduct 'effective talk'. Establishing ground rules for talking to each other. Giving children a range of logic tasks and puzzles where they could try out the ground rules for talk. Observing and obtaining feedback from children. Giving children science concept cartoons to work on in groups of three. Moving on to giving children a title of a science investigation and asking them, in groups of three again, to decide on an approach to answer it.

- Phase three. Sharing findings with two members of staff from different year groups and asking them to trial lessons from phase two. Sharing findings with whole school and implementing change.

Outcomes from our inquiry:

We have familiarized ourselves with the 'three kinds of talk' stated by the Thinking Together project – 'disputational' talk in which there is a lot of disagreement, little collaboration and little real interaction, 'cumulative' talk where everyone simply accepts and agrees with what others say and there is

no evaluation of each others' ideas, and 'exploratory talk' where everyone engages critically but constructively with each other's ideas, asking for reasons and reaching agreement.

Research was also carried out into different types of thinking. A member of staff attended a course entitled 'Developing Thinking, Learning and Creativity at Key Stage 1 and 2'. The different types of thinking discussed were:

- Information Processing
- Inquiry Skills
- Reasoning Skills
- Creative Thinking Skills
- Evaluation Skills

We decided initially to focus upon inquiry and reasoning skills, as we felt they were the most relevant to Science AT1. Inquiry skills involve children asking relevant questions, planning what to do, predicting outcomes, testing conclusions and improving ideas. Reasoning skills enable children to give reasons for opinions, draw inferences and make deductions, use precise language to explain what they think and make judgements and decisions informed by reasons or evidence.

In phase one, when observing children involved in science group work, these were the main findings:

- Generally, children did not listen to each other.

"Just write that answer down."

- One child would decide who would scribe.

"You've got neat writing, you can write it down."

- Often, one child dominated and made the decisions without real consultation.

- Answers were closed.

"No, because you should."
"OK. Yes."
"That's not right."

- In some groups, the atmosphere was very competitive.

We gave the children a questionnaire to find out how they felt about problem solving.

- Children felt they couldn't solve problems.
- Some children did not know how to start.
- Others felt frustrated when they got it wrong.
- They talked about one child in a group taking over.

When asked what makes talk effective, responses included:

- Being a talkative person.
- Listening to each other.
- Giving a reason why someone thinks something.
- Looking at the person you are speaking to.
- Trying to answer a question.

It was clear that a high percentage of children were not confident in solving problems and found working together in groups of three a frustrating experience.

We then moved on to phase two where we had explicit lessons exploring what effective talk is and establishing ground rules, using the 'Thinking Together' approach.

Our progress and findings have been reported during PSLN meetings, where we also get the chance to hear about other inquiries and share good practice. We are also going to present the work at the next Conference at the end of June. PSLN meetings and events have also given us the opportunity to share this work with network colleagues and to plan for future collaborative work, including conducting learning walks.