Booklet 2

National College for School Leadership

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Network leadership in action:

Networked Research Lesson Study in practice

Illustrative accounts of what Networked Research Lesson Study looks like in practice.

CfBT Research & Development

Networked Learning Communities

learning from each other | learning with each other | learning on behalf of each other

Snapshots of practice from Networked Research Lesson Studies

The vignettes of research lessons which follow are taken from Research Lessons Questions (RLQ) at Key Stages 1 and 3 and cover a broad range of subjects and approaches.

They are drawn from the experience of the CfBT–NCSL Networked Research Lesson Study project and provide practical illustrations of what Networked Research Learning Study looks like in action, in a variety of contexts.

Core subject approaches: literacy and numeracy

KS1 maths. RLQ **How can we engage pupils minds more actively in the mental maths sessions in our oral and mental starters?**

Four Research Lesson Studies. Two research teachers.

Teachers developing an aspect of pupil talk in relation to an Assessment for Learning (AfL) network pupil focus, asked themselves whether the repertoire of shorter 'talk' devices they used with their Year 1 and Year 2 pupils were really getting 30 brains into gear. They used research lessons to evaluate the active learning actually going on during their regular 'quick talk' sessions (eg think-pair-share, breakouts, buzz-groups, response partners etc) They found fewer than half the pupils really actively speaking and listening with purpose. They used another research lesson to test a hypothesis they had developed, where one pupil in each pair had to role-play their actual teacher asking questions, demanding justifications and giving feedback.

Findings and outcomes

Despite the 'horror' of seeing 15 or more mini versions of themselves teaching Number, the subsequent research lessons demonstrated an enormous improvement in pupils' engagement and progress. They tested it in literacy with similar results. They recorded their processes and led a staff meeting for colleagues from their school, network and another network to share their findings. This technique is now being replicated in a growing number of classrooms. The two teachers are videoing the technique they have developed and will place illustrative video-clips on their network website.

KS3 English. RLQ **How can we make the most effective use of 'move on up' criteria sheets in writing?**

Five Research Lesson Studies. Three research teachers.

Year 9 students had been working in classrooms in which National Curriculum within level descriptors had been displayed on the walls for some time – but never actively used by teachers or pupils. AfL research shows the gains that can be achieved in pupil learning when success criteria and clear evidence of what is being progressed towards is built into teaching and learning. Three teachers in the English department decided to investigate whether pupils' progress in writing could improve by making active use of these criteria.

Over a sequence of lessons they observed how their case pupils worked with the criteria. They filmed short but relevant sections of the lessons and used the video to help their analysis of how the pupils had been learning. They also involved the pupils in the research – asking for feedback on their views via interviews and questionnaires. They varied the ways in which pupils used the criteria each time on the basis of their learning so far.

Findings and outcomes

The engagement and progress made by the case pupils and the class as a whole, improved as a result of their engagement with the success criteria at the points in the lesson most useful to them for learning. Pupils also liked being consulted about the learning and appreciated the fact that their views were responded to. They shared their learning by working with colleagues in maths to develop a similar approach. They also edited their video and created an artefact using this and the materials they had adapted for others to use.

Analysis

These two case studies illustrate teachers working together to learn how to learn, how to teach systematically *and* in ways which clearly benefited pupil needs.

They were working with colleagues in a situation where they had agreed ground rules for research – like behaviour.

Most importantly that they would take risks and learn from what went wrong. They made use of research. They also involved pupils actively.

"We can always do the 'performance lesson' for performance management or the demonstration lesson for Ofsted – but this was [my colleague] and we trusted each other. We knew what to teach, but it was the unpicking of it and finding out how."

Pedagogical approaches: Assessment for Learning and Thinking Skills

KS3 subject: MFL, Pedagogy: AfL
RLQ **How can we structure group work in order to improve peer assessment and problem solving?**

Four Research Lesson Studies. Three research partner teachers.

Initial data were collected in order for teachers to get a better understanding of the problem in observed research lessons – where different approaches were taken to selection of groups, kinds of problems posed etc.

Finding that the kinds of talk generated were diverse and needing a framework, the research partners consulted Neil Mercer's book *The Guided Construction of Knowledge: talk amongst teachers and learners of* (1995).

This provided a framework for the researchers to analyse the pupil talk in use. It also enabled them to present their findings to the pupils themselves, to attempt together to find ways of ensuring all learners – boys, girls, lower and higher attaining were able to learn more effectively through problem-solving.

Findings and outcomes

By the end of the study the teachers involved had discovered ways of structuring and categorising group talk in collaborative problem-solving activities. These were engaging more pupils including the lower attaining pupils, which were allowing them to operate at higher National Curriculum levels than they would otherwise have been doing. The lesson study was shared at departmental, school and network level and led to a take up of more lesson studies to problem solve related issues in three other departments.

KS3 subject: science. Pedagogy: Thinking Skills
RLQ **How can we use Thinking Skills techniques to improve pupil and teacher questioning?**

Three Research Lesson Studies. Four research partner teachers, plus seven ITT students.

The research partners planned a sequence of three research lessons with an outline on elements, mixtures and compounds, environment and feeding. They used a Thinking Skills technique called 'odd one out' to generate discussion and questions. Their data gathering focused upon the different types of questions asked by teachers and the case pupils.

They used Bloom's taxonomy to analyse the types of questions observed and tried to correlate to pupil engagement and learning, They controlled their variables carefully and modified their research lessons in the light of analysis each time. They also asked pupils to complete questionnaires to help validate their findings.

Findings and outcomes

The research teacher team discovered a number of ways in which they could use 'odd one out' activities to much better effect in terms of the kinds of questions being generated by pupils and consequently, the quality of the talk generated, and the amount of higher order cognitive activity and learning going on.

The team also generated some more areas which it was going to be important to study if this initial learning was going to be taken further, to form part of a more complex disciplined innovation in teaching.

Analysis

These two lesson studies show teachers tackling complex problems through lesson study. They use the research lessons to establish more clearly what the issues are and how they may be tackled, and then use further research lessons to test out ideas and innovate practices.

In both cases, they actively and overtly involve pupils in the process – seeking their views. In both cases, they also used the knowledge-base to find out what is already known about their area of interest – Assessment for Learning research and talk in learning research.

Without this, both could have ended up spending time replicating knowledge which is already known, or worse still, drawing conclusions which are false or poorly informed.

Cross-curricular: music and science

KS3 subjects: science, MFL, EAL
Pedagogy: literature across the curriculum
RLQ **How can we use MFL techniques to boost pupil achievement in science?**

Four Research Lessons Studies. Three research partner teachers.

An analysis of pupil data revealed a group of Year 9 pupils who were predicted to achieve Level 4 in science in Key Stage 3 tests. Their class teacher felt they knew the science and were held back in test scores by their early developmental stage in English, which was causing them to fail to articulate the science he felt they knew.

He worked with colleagues from the Modern Foreign Language (MFL) department. They used a research lesson to establish the degree to which his hypothesis may be correct – using non-verbal assessment methods to ascertain the pupils' levels of scientific understanding. They then brainstormed approaches using language learning techniques which may help develop the pupils' abilities to structure, sequence and express their scientific understanding in written answers to questions. The science lessons began to incorporate activities such as cut up instructions to sequence, structured cloze test and DARTs activities which pupils did in pairs and groups. The research lessons were used to establish ways of making these more effective by close observation of focus pupils.

Findings and outcomes

Pupil attainment expressing science orally and in writing soared. All but one of the pupils predicted to attain Level 4 in fact attained Level 5.

KS3 subjects: science, music, EAL.
Pedagogy: peer tutoring
RLQ **How does peer tutoring in music work – and how can the science department learn from the technique in order to improve science teaching and learning?**

Three Research Lessons Studies. Four research partner teachers plus seven ITT students.

An advanced skills teacher in science wanted to find out how a successful science department, in a multilingual school, could learn from an exceptionally successful music department. What techniques could be replicated or adapted? Research lessons were used to identify how peer tutoring was used and how pupils utilised and benefited from the techniques. Only this level of study would enable understanding of the process in sufficient depth to begin to design similar approaches in science.

A sequence of lessons was observed and captured on video. The research partners made more and more targeted use of the video to enable subsequent studies of the developments and behaviours of the focus pupils.

Findings and outcomes

The study enabled the research team to be very explicit about the component parts of the peer tutoring which was in use so successfully and to analyse how these worked. They produced artefacts to illustrate these (please see **www.nlcexchange.org.uk** for details).

They also produced evidence of the enhancement of pupil learning of music, English acquisition, self-esteem and confidence to learn. The next quest is to use Research Lesson Study to implement what was learned in science.

Analysis

These two examples both show careful studies, which have enabled learning to travel between departments in the same school. The research teachers took care not to make assumptions about what 'peer music tutoring' or 'writing about science' might involve.

They used the research lessons to ensure that the understandings were deep and shared across the subject boundaries, before attempting to solve the issues. But both also show how the learning about how to teach, which the teachers gained, impacted upon pupil learning and achievement – in the first of the two cases, dramatically improving upon predicted Key Stage 3 and GCSE grades (their validation test). All these colleagues had taught together for some years, but it has been Research Lessons Study which has opened the doors, or glass walls, between departments and subject areas.

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