Talking science in South African high school classrooms

BACKGROUND - The context is:
• Implementation of a new curriculum in South Africa
• Shifting to learner-centred methods - promoting student participation/engagement
• The challenges of achieving the requisite shifts in teachers’ pedagogical practices
• Previously disadvantaged township schools

My study- To understand:
• how teachers could use science talk to promote student participation and engagement in science
• the nature of interactions that emerge from science talk

Emerging findings:
Classrooms more interactive:
a) Increased student-student (Sx-Sy) interaction
b) Change in nature of teacher-student interactions from IRE to ternary interactions

However, while teachers promote/model participation they maintain authoritative/high control approach; concerned with time/syllabus coverage/exams

Data analysis: For analysis of teacher-student talk I used Mortimer & Scott’s (2003) model for analysis of classroom interactions

For analysis of student construction of scientific arguments I used an adapted version of the TAPping model (Erduran et. al. 2004)

Implications for teacher professional development:
• Important to model teaching strategies for interactive engagement
• Teacher up-take is possible but requires sustained on site intervention programmes

Policy: Persistent mis-alignment of curriculum & assessment policies as well as LoLT policy debates

Some conference papers
2010 Modelling argumentation in whole class discussion: a novice teacher’s adaptation of a teaching strategy.
2010 Student discussions of IK on owls: Ideas for implementing LO3 of the new curriculum.
2009 Bite size chunks: The challenges & potential of working with learners’ ideas in science classrooms.
2008 The potential for argumentation in the implementation of the new curriculum in South Africa.

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PhD focus: Teacher-student classroom interactions & student construction of scientific arguments

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