

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



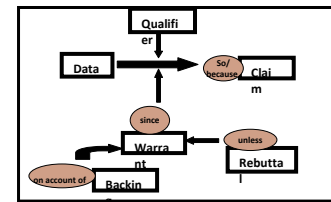
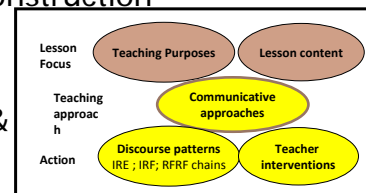
My study- To understand:

- how teachers could use science talk to promote student participation and engagement in science
- the nature of interactions that emerge from science talk



Theoretical orientation:

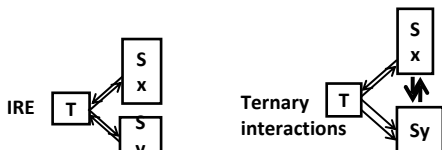
Science talk is viewed as both a strategy for teachers (T) and a tool for student (S) knowledge construction



Emerging findings:

Classrooms more interactive:

- Increased student-student (Sx-Sy) interaction
- Change in nature of teacher-student interactions from IRE to ternary interactions



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.

Audrey Msimanga

School of Education, University of the Witwatersrand, Johannesburg, South Africa.

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

Lecturer: Science education & Curriculum
Previous experience: High School Science teacher (Biology & Physical Science)

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