Borko, H., Eisenhart, M., Brown, C. A., Underhill R. G., Jones, D. & Agard P. C. (1992). Learning to teach hard mathematics: Do novice teachers and their instructors give up too easily? *Journal for Research in Mathematics Education* 23 (3) 194-222.

The authors focus on subject knowledge and beliefs in mathematics and its teaching as having the strongest influence on effective teaching in their view. In concluding their paper, however, they also acknowledge the limitations of improving teacher preparation courses recognising the competing demands on student teachers and the privileging of 'practice' in learning to teach. Reviewing the student teacher's lesson and her evaluation of it, taking into account he context in which it took place, might add to explanations of why she did not follow through her own identification of failure to explain adequately.

Ms Daniels appeared to be more concerned about whether she lost time by dealing with the child's question and felt happy overall with the lesson despite her recognition of the problem. Her knowledge was challenged in the teaching situation but she seemed not to have prioritised the conceptual understanding of children in her evaluation of the lesson. Her priorities seem to relate to whether children could replicate procedures and whether she could cover the lesson content. Her criteria for evaluation were thus at odds with those presented by the authors as representing 'effective' teaching. While not diminishing the importance of student teacher knowledge and beliefs, this needs to be examined within its context in order to try to explain why Ms Daniels did not follow up her faulty explanation but appeared to be more focused on pressing on with delivery of content. The modelling of teaching in her school placement and implicit and explicit ways of thinking about mathematics there could be factors. Discourses about mathematics teaching (with possible conflicts in ideas between university and school) and expectations of student teachers in their assessment could thus work against the development of subject knowledge and reinforce previously held beliefs about teaching.

As well as the competing demands the student teacher faces, the authors raise the issue of the privileging of practice over what is learned as part of teacher preparation. They suggest her belief in 'the central role of practice' may have served to underline that it is through practice that she will learn to teach and to diminish work on her knowledge, for example, through her own systematic study of mathematical concepts and appropriate teaching approaches.

The authors suggest that teacher education programmes could work to prepare student teachers more effectively to meet the challenges of heavy and sometimes competing demands as they learn to teach and to be able to continue to develop independently their knowledge and beliefs. In order to do this, teacher educators will need to consider in their courses tensions in their work, such as: depth and breadth in curriculum coverage; auditing procedures and self evaluation in student teacher subject knowledge; and opportunity for student teachers to deconstruct and reconstruct their knowledge and beliefs about teaching and mathematics and the potential emotional repercussions of this process.

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