PROFESSIONAL GROWTH AND CHANGE THROUGH COMMUNITIES OF INQUIRY

Kristen Tripet

Contact Author: Kristen Tripet (kristen.tripet@science.org.au)

Australian Academy of Science, Canberra ACT 2601, Australia

THEME:

Teacher education and professional learning in STEM

BACKGROUND AND AIMS

Researchers have examined different approaches, processes, and resources to understand and identify characteristics of effective professional learning (PL) for teachers. Some characteristics of effective PL that have emerged from this research work include: practice-based learning; drawing on teachers' practical knowledge and experience; school-based programs; learning in community (Borko et al., 2010; Chapman, 2011).

This paper reports on a study of a PL program designed to build primary teachers' capability in delivering mathematics instruction. The study was guided by the question: What are teachers' conceptions and practices relating to inquiry-based instruction in mathematics prior to and after their involvement in the PL program?

METHODOLOGY OR PROCESS(ES) UNDERTAKEN

The PL program was designed around effective characteristics of PL, with a key feature being school-based Communities of Inquiry (CoI). CoI are defined as communities of teachers' who engage in "systematic, intentional study of their own practice to create something new or different in terms of their knowledge and teaching" (Chapman, 2011). Two primary schools based in Sydney, Australia were involved in the study. Narrative inquiry methods (Kramp, 2004) were employed, with teachers sharing narratives associated with task implementation prior to and during the study. These narratives were audio recorded and transcribed. In addition to these narratives, teaching artefacts including work samples and teachers' notes were collected. Qualitative methods were used to analyse these recordings to determine changes in teachers' conceptions and practices.

RESULTS AND CONCLUSIONS

Data relating to teachers' conceptions and practices of inquiry-based instruction in mathematics are currently being collected. Analysis of data and initial findings will be available for a finalized abstract in July. Implications of these findings will not only help develop the effectiveness of the specific PL program but will shed light on how CoI more broadly can enhance teacher knowledge and practices.

REFERENCES

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