

EVOLVING A COMMUNITY OF PRACTICE TO ENHANCE THE PRE-SERVICE EXPERIENCE OF MATHEMATICS TEACHERS

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KEYWORDS: Community of practice, retention, pre-service teachers

Problem

Secondary mathematics teachers are in short supply and this problem is exacerbated by attrition. A recent review of research on early career teachers (Buchanan et al., 2013) confirms that somewhere between 20% and 40% of teachers have contemplated leaving the profession at some stage in their first five years. Real and perceived isolation and the level of collegial support were amongst the main contributing factors. Thus, a specific goal of the Inspiring Mathematics and Science in Teacher Education (IMSITE, 2014) project undertaken at the University of Sydney is increasing social and academic networks amongst undergraduate pre-service teachers.

Plan

Our conceptual framework draws on Wenger's (1998) social theory of learning and the notion of communities of practice. Such communities exhibit mutual engagement of participants and coordinate their complementary expertise and they help develop a shared repertoire of language and concepts. The opportunity to share experiences and engage in challenging but supportive conversations about teaching are an important feature of successful learning communities (Grossman et al., 2001) but such communities are difficult and time-consuming to build. Fostering participation in such communities from the very first day at university will build familiarity and confidence for preservice teachers to engage in critical dialog and reflection.

Action

Community building initiatives undertaken at the University of Sydney as part of IMSITE include timetabling pre-service teachers into common "streamed" mathematics tutorial groups and providing former high school teachers as their tutors, holding regular social functions, hosting alumni conferences where in-service and pre-service teachers can meet and interact, and building mentoring groups of 1 or 2 pre-service teachers working with 2 to 4 experienced teachers.

Reflection

Preliminary evaluations reveal that 90% of pre-service teachers indicate a greater sense of belonging in streamed tutorials than in non-streamed ones. More than two-thirds of pre-service teachers have also indicated that participation in IMSITE initiatives has contributed positively to their goal of becoming a mathematics teacher.

References

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Proceedings of the Australian Conference on Science and Mathematics Education, The University of Queensland, Sept 28th to 30th, 2016, page 131, ISBN Number 978-0-9871834-5-3.