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Developing algebraic and didactical knowledge in pre-service primary teacher education.

Tso, Tai-Yih (ed.), Proceedings of the 36th conference of the International Group for the Psychology of Mathematics Education “Opportunities to learn in mathematics education”, PME 36, Taipei, Taiwan, July 18–22, 2012, Vol. 2. Taipei: National Taiwan Normal University. 75-82 (2012).

Summary: This study analyzes the contribution of a teaching experiment for the development of prospective primary teachers regarding knowledge of algebra and of algebra teaching as well as their professional identity. The case study of a prospective teacher suggests that an exploratory approach combining content and pedagogy supports this development, especially in the need to propose challenging tasks, to provide opportunity for students’ autonomous work and collective discussions and to be attentive to children’s representations and strategies in order to promote algebraic thinking.

Classification: D39 H29 H39

Keywords: algebra; algebra teaching; professional identity; algebraic thinking; teacher education