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Prospective teachers' learning to provide instructional explanations: how does it look and what might it take?

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Summary: Several studies have documented prospective teachers' (PSTs) difficulties in offering instructional explanations. However, less is known about PSTs' learning to provide explanations. To address this gap, we trace changes in the explanations offered by a purposeful sample of PSTs before and after a mathematics content/methods course sequence. Consistent with prior research, our study reveals the limitations in PSTs' explanations at their entrance to the course sequence. It also documents PSTs' progress in providing explanations, thus providing existence proof that this practice is learnable. Using evidence from multiple sources, we also propose a component entailed in this learning-learning how to unpack one's thinking through the use of representations as explanatory tools-and four factors associated with it, including PSTs' subject-matter knowledge, active and deliberate reflection on practice, productive images for engaging in this work, and productive dispositions about engaging in this practice. We discuss the implications of our findings for teacher education and offer directions for future research.

Classification: B50 C70

Keywords: instructional explanations; prospective teachers; teacher education

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