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A teacher's conception of definition and use of examples when doing and teaching mathematics.
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Summary: To contribute to an understanding of the nature of teachers' mathematical knowledge and its role in teaching, the case study reported in this article investigated a teacher's conception of a metamathematical concept, definition, and her use of examples in doing and teaching mathematics. Using an enactivist perspective on mathematical knowledge, the authors give an account of the case of Lily, a prospective, then beginning, teacher who conceived of mathematical definition as an object with particular form and function and engaged in purposeful, specialized use of examples when doing and teaching mathematics. Lily's case illustrates how a teacher's interpretation of examples (as exemplifications or single instances) and conception of the form and function of definitions can influence her doing and teaching mathematics. An implication is that teacher preparation should foster teachers' abilities to use examples purposefully to provide students with rich opportunities to engage in mathematical processes such as defining.

Classification: E49 C49 C39 D30 D40

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