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Preservice teachers' understanding and representation of fractions in a JavaBars environment.

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In recent years, considerable research effort has been invested in identifying the nature of the knowledge that drives mathematics teachers' actions in the classroom. While this investigation has generated a useful body of information, there has been little information about changes in the character of this knowledge when teaching involves the use of technology. In this paper, I address this issue by examining a group of preservice primary mathematics teachers' understanding of fractions. The participants were required to order fractions within software called JavaBars. The results suggest that, while the preservice teachers had built up robust knowledge about fractions, they experienced difficulty in translating this knowledge in the JavaBars environment. (Author's abstract)

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