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Stephen Monk* (smonk@u.washington.edu), Department of Mathematics, University of Washington, Seattle, Washington. *The Case for Situated Knowledge: The Concept of Function as Socially Embedded Practices.*

The concept of function is to high school and college mathematics as the concept of place-value is to K-6 mathematics. It unifies and explains a world of phenomena and practices to those who have a thorough and abstract knowledge of the domain, but is outside the range of experience of those who are working to master the domain. Researchers and teachers who explain students understanding of the domain in terms of this concept miss the richness and complexity of students struggles and fail to identify critical local openings and turns where teaching might help them. I will present a few encounters of students working with functional situations to give a sense of what is lost by describing students experience in terms of this abstract and general concept. (Received October 04, 2000)