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Martin, Lyndon; LaCroix, Lionel; Fownes, Lynda

Folding back and the growth of mathematical understanding in workplace training.

Adults Learn. Math. 1, No. 1, 19-35 (2005).

Summary: This paper presents some initial findings from a multi-year project that is exploring the growth of mathematical understanding in a variety of construction trades training programs. In this paper, we focus on John, an entry-level plumbing trainee. We explore his understandings for multiplication, fractions and units of imperial measure as he attempts to solve a pipefitting problem. We consider the apparently limited nature of his images for these concepts and the role of ‘folding back’ in enabling his growth of understanding. We contend that it cannot be assumed that the images held by adult apprentices for basic mathematical concepts are flexible, deep, or useful in specific workplace contexts. We suggest that folding back to modify or make new images as needed in particular contexts is an essential element in facilitating the growth of mathematical understanding in workplace training, but also offer a note of caution about ensuring that this is genuinely effective in its purpose.

Classification: M27 F47 C37 D67

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