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Martin, Lyndon; Towers, Jo

“Some guys wouldn’t use three-eighths on anything ... ”: improvisational coaction in an apprenticeship training classroom.

Adults Learn. Math. 7, No. 1, 8-19 (2012).

Summary: This paper presents some ongoing findings from a larger project exploring the growth of mathematical understanding in a variety of construction trades training programs. In this paper we specifically focus on the notion of collective mathematical understanding in an ironworking apprenticeship classroom. We identify the particular ways in which a group of three apprentices work collaboratively together to solve a workplace problem with a substantial mathematical element. Through drawing on the notion of ‘improvisational coactions’ [the authors, Res. Math. Educ. 11, No. 1, 1-19 (2009; ME 2010d.00157)] we detail the ways that individual ideas, understandings and contributions mesh together and are collectively built on by the group to allow a shared understanding to emerge. From this analysis we suggest that improvisational coactions can be a powerful means through which apprentices in the workplace-training classroom might effectively learn to tackle workplace problems that involve thinking and working mathematically. Although our conclusions are specific to this case, we would suggest that there are implications that may be relevant to other areas of workplace training.

Classification: C37 M37 C77

Keywords: group work; improvisation; workplace; learning; vocational training