

ZMATH 2015f.00366

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Connecting mathematics teaching with vocational learning.

Adults Learn. Math. 10, No. 1, 40-49 (2015).

Summary: For many vocational students in England, mathematics is now a compulsory part of their programme, yet the inclusion of an academic subject within a vocational course presents challenges. In this paper, an analysis of a series of case studies of vocational student groups in Further Education colleges in England shows how contrasting practices in 'functional mathematics' and vocational classes reinforce perceptions that mathematics is an isolated and irrelevant subject. Some mathematics teachers made contextual connections by embedding mathematical problems in vocationally-related scenarios but distinctive socio-cultural features of vocational learning situations were often absent from mathematics classes. Addressing this disconnection requires a pedagogical approach and classroom culture that links mathematics learning with vocational values. The findings suggest that adopting mathematics classroom practices that reflect the surrounding vocational culture creates greater coherence for students and has positive effects on their engagement with mathematics learning.

Classification: D35 D37 B30 B60 C25

Keywords: vocational education; further education; adult education; tertiary education; functional mathematics; educational research; case studies; colleges; motivation; student attitudes; choices; goals of mathematics education

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