NETWORKING FRAMEWORKS FOR ANALYSING TEACHERS' CLASSROOM PRACTICES: A FOCUS ON TECHNOLOGY

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This poster presents research aimed at networking two frameworks for analysing teachers' classroom practices: instrumental orchestration (Trouche, 2004) and Ruthven's (2007) five-point framework. English and Sriraman (2005) suggest it is time to "take stock of the multiple and widely diverging mathematical theories". In response, Bikner-Ahsbahs and Prediger (2006) develop the notion of *networking* theories as a means of improving coherence while respecting the richness of diverse theoretical frameworks. Networking theories in research on the use of technology in the teaching and learning of mathematics is especially pertinent. Firstly, research in this area reflects general trends in mathematics education. Secondly, tensions between theory and practice are particularly prominent. Research has highlighted the potential of digital technologies to enhance mathematics education. In contrast, the reality of classroom use remains limited. In the UK, the use of technology in school mathematics has remained weak and often fails to realise its potential.

The instrumental approach developed from attempts to theorise tool use. In contrast, Ruthven's framework is developed from attempts to theorise teachers' classroom practices. The two frameworks thus represent quite different, yet potentially complementary, perspectives on the complexity of technology integration into mathematics teachers' classroom practices. Using these frameworks, this poster analyses data gathered from interviews and classroom observations of four mathematics teachers regarding the integration of digital technologies into their classroom practices.

References

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