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Function representations and technology-enhanced teaching.

Bana, Jack et al., Mathematics education beyond 2000. Vol. 1. , (ISBN 0-9596844-8-4). 172-179 (2000).

In recent years calculators and computers have been used more often in mathematics teaching. While their potential advantages in terms of dynamic multiple representations has been recognised for some time, it has not always been clear how to integrate the technology into conceptually based teaching. While it is generally agreed that technology could play an influential role in enhancing mathematical understanding, there is little data about how students' cognition and knowledge building are affected by the instructional use of such tools. In particular, a theoretical perspective on how to teach in such a way as to encourage students to build inter-representational conceptual structures has been lacking. In this study we take up this issue by examining how two experienced teachers plan and incorporate calculator and computers in their teaching. The results suggest that these teachers aim to build knowledge schemas that are rich in connections and representations.

Classification: I20