Mixed mode approaches to sustainable mathematics teacher educator development in areas with limited access to digital technologies

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We analyse outcomes from a Mathematical Thinking and IT course adapted for East African mathematics teacher educators. The model supplements a ten-day face to face course with three months distance learning as participants adapt and harness research-based materials and approaches. We asked, What are the affordances and constraints of this model, and of the available technology, for mathematics teacher educator development in this context? Qualitative evidence of mathematics teacher educators longitudinal trajectories suggest that mathematics teacher educators with a threshold level of capacity for change, including critical levels of reflection, were able to make significant progress in their technological, mathematical and mathematics pedagogical expertise and to adapt, embed and further develop that in their practice, at least in the short- and medium-term; in contrast, those without such a threshold capacity appeared unable to re-envision practice. The initial course appeared sufficient to equip professionally confident mathematics teacher educators with technological capacity to access a range of materials for learning, and to support professional interchanges and development at a range of levels and granularities.

However, subject-specific software and sources that support deeper mathematics learning, while appreciated by mathematics teacher educators, are not reliably and widely accessible in teacher or school student institutional contexts.

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