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**The instructor experience of fully online tertiary mathematics: a challenge and an opportunity.**

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Summary: As part of a dramatic recent shift in tertiary education, many undergraduate students now learn mathematics via fully online courses. At present, the mathematics education research community knows very little about this shift, and in this report, we consider implications of an investigation into the instructor experience of fully online undergraduate mathematics courses. To compare instructor experiences of fully online and face-to-face teaching, we explored assessment schemes, feedback processes, and approaches to teaching using a survey and semistructured interviews. The main emergent theme was instructor concern about the loss of short-cycle face-to-face human interaction. We argue that this concern is serious but should be seen as an opportunity for education researchers to leverage knowledge about effective mathematics teaching to simultaneously alleviate instructors' difficulties and promote and study pedagogical development.

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