

Editorial

Teaching Mathematics: The Long Journey for Teachers

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For the vast majority of teachers, the journey to being a really effective mathematics teacher is a long and often challenging one. Continuous learning about mathematics and mathematics education is required if a teacher is to arrive at the desired destination (though some would say that if we stop striving toward the goal of being the best teacher we can be, it is time to retire!). The articles in this issue of MTED tell some stories about teacher journeying.

Continuing the metaphor

The journey begins with our own schooling, where we are equipped with the basic kit of knowledge and understanding that we will need to take with us out onto the open road. As explained by Norton in the first article, the more mathematics we do in high school, the more successful we are likely to be in the next phase of the journey – as the road passes through ‘teacher-preparation land’. Here the road can become quite slippery as we discover that we don’t know the mathematics as well as we thought we did, particularly when put into the context of teaching it to someone else. This ‘slipperiness’ is illustrated through Chesler’s article about the deficiencies in teacher education students’ ability to work with mathematical definitions.

The next part of the journey takes us back into the realm of schools, but with vastly different roles and responsibilities to our student days. Schools are of course situated within a world of imposed policies, curricula and standardised testing. When faced with pressures to implement particular teaching approaches, teachers often need to develop new knowledge and skills. The Harvey and Averill article explores the complexity of planning and implementing context-based mathematics teaching in response to an initiative for increasing the connection of mathematics to real-life problems.

Responding to external pressures can locate teachers at a fork in the road. One path may lead onwards and upwards to higher-quality teaching, while another might lead to a dead-end or divert them onto a longer route to the journey’s goal. Sometimes we need to pause and ask for some directions. Anderson and White’s article demonstrates how – with a little guidance from professional conversations – the information from national tests can lead to informed decisions about teaching directions, rather than leading to ‘teaching to the test’.

Clearly the key to a successful journey is ongoing learning by teachers. Like the students they teach, teachers learn more effectively when supported by colleagues, or, as described by Polly in the final article, scaffolded by a professional coach. And sometimes, gaining advice by reading a good professional journal like MTED can help too!