

THE BIG IDEA

Dr Sarah Cousins shares research insights into overcoming students' anxiety over maths learning.

The Centre for Lifelong Learning at the University of Warwick offers routes to degrees, such as Foundation and 2+2 degrees, in partnership with FE colleges. But some learners lack the necessary qualifications or grades in English and mathematics to progress to particular professions.

In 2016-17 learners were offered the opportunity to gain them at Warwick. In 2017-18 a centre was set up to offer Functional Skills Level 2 qualifications to apprentices. Research was also done on mathematics anxiety and avoidance, and how learners overcome these feelings.

It is sometimes believed that people either have or haven't got a maths brain (fixed mindset, Dweck, 2015). But the research found it was possible to acquire mathematical resilience. When anyone returns to something they fear, their *perezhivanie* (Vygotsky, 1994), or how their unique emotional experiences and psychological dispositions affect their experiences, is involved. Learners' past, negative experiences of learning mathematics were therefore considered.

Learners said that other people helped them, including teachers, peers, neighbours, children, partners and friends.

As Masten (2001: 235) proposed, resilience may be acquired from the "everyday magic of ordinary, normative human resources in the minds, brains, and bodies of [people], in their families and relationships, and in their communities".

So the social and emotional aspects of learning are as important as the cognitive ones. Johnston-Wilder et al. (2017: 52) say people's "emotions, attitudes, beliefs, motivation, perseverance and interest, as well as anxiety, avoidance and helplessness" all make up their affective reality. Mathematical anxiety can be overcome and resilience acquired if a number of positive conditions combine to change learners' perceptions.

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