

Identity and Mathematics Education

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Over a number of years now there has been interest in the concept of ‘identity’ in mathematics education. Interest has been sustained for some time, to illustrate: in 2006 myself and colleagues from Charles Sturt University presented a MERGA symposium on this topic (and one of our 4-page) papers now has over 175 citations; in 2019 Mellony Gravan led a special issue of ZDM on identity; and, at the recent ICME in Sydney there was Topic Study Group 5.1 which also focussed on identity. Furthermore, the notion of identity has been used and conceptualised by researchers from a range of disciplines including the psychological/developmental, the socio-cultural, and the post-structural.

In this round-table discussion I want to present another view—a site-ontological practice perspective of mathematical identity. This perspective sees mathematical identities being formed and sustained through participation in mathematical practices, in ensembles (or communities of practice) of other *mathematicians*. This, in essence, is learning—ontological transformation by being “stirred into” mathematical practices through participation (Kemmis, Edwards-Groves, & Grootenboer, 2025). This view is grounded in the seminal work of Lave and Wenger, where they showed that identity, practice and learning are inter-related. In 1998 Wenger said, “there is a profound connection between identity and practice” (p. 149), and

The experience of identity in practice is a way of being in the world. It is not equivalent to self-image . . . Who we are lies in the way we live day-to-day, not just in what we think and say about ourselves, though this is of course part (but only part) of the way we live. (p. 151)

Currently, mathematics is generally seen as being experienced at school in classrooms and textbooks. These classrooms and lessons, and the teaching practices that are employed, create the conditions for the formation of mathematical identities, and so for many years students have developed mathematical identities that would appear to be debilitating and even inconsistent with the nature of mathematics. If mathematics education is not so much about *learning something*, per se, but rather an initiation into practices through “legitimate peripheral participation” (Lave & Wenger, 1991), then the social participation in communal activities, where the individuals create and recreate their personal and shared identities through their common practices (i.e., in communities of practice) will be crucial. In this session we will discuss: If mathematical identities are formed through the participation in mathematical practices in classrooms:

- How can these practices be ‘authentically’ mathematical? And how can the sites where they are ‘learned’ be reflective of the ‘mathematics community of practice’?
- Is the purpose of mathematics education to provide conditions and arrangements which enable learners to participate in substantive mathematical practices, and so foster robust mathematical identities—identities that would see them as knowledgeable and confident in learning and doing mathematics?

References

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