

Emerging teacher identities: Exploring the identity negotiation of early career teachers of mathematics

Amy Birkhead, Sheffield Hallam University, ✉ a.birkhead@shu.ac.uk

In England, the recruitment and retention of secondary mathematics teachers is of continuing concern to governmental bodies. The teachers most likely to leave the profession are in their first five years of teaching, where their performance is subject to intense scrutiny, judgement, and measurement. Given this context, a better understanding of the identity negotiation of these teachers could improve teacher retention, as well as help prepare and support teachers at the start of their career. This presentation will focus on the early analysis of a pilot study which aims to understand how context and experiences with mathematics as a student can contribute to an emerging teacher identity.

Background

The manifestations of neoliberalism can be seen in all aspects of English education policy, including the way teachers' work is specified through detailed teacher standards and monitored and audited through performance management systems and mechanisms. The current context poses additional challenges for early career teachers (ECTs), defined as those with less than five years of experience, whose 'performance' is subject to even more intense scrutiny than that of other teachers (Hobson & Maxwell, 2017) and who are required to pass both their training course and first year of teaching against the same set of standards. In an attempt to assess the quality of teaching and learning, policy makers have often chosen lesson observations as the easiest way to capture the complexities of teachers' work. A result of such high-stakes assessment of teachers' practice is that many teachers discount pedagogical ideas and practices that do not work to their personal advantage in a performative system (Loh & Hu, 2014; Smagorinsky et al., 2004). ECTs in particular may find themselves having to make difficult choices between pleasing the cultural gatekeepers of the school and their own ideals and values.

This study focuses on the identity negotiation of ECTs of mathematics during the period of induction into their school. During socialisation into the school setting, the school culture coupled with workplace opportunities and constraints on pedagogical choices impact on an emerging professional identity. This research takes place at a time of significant policy change for the induction of ECTs with the launch of the Early Career Framework (ECF), which has been promoted as "the most significant reform to teaching in a generation"

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(Department for Education (DfE), 2019, p. 6). Introduced in a select number of areas from September 2020 and nationally from September 2021, the ECF entitles new teachers to a two-year induction, access to a trained mentor and a professional development programme delivered by one provider, chosen by the school from a small number of DfE approved providers. How each school chooses to interpret, enact and manage the framework means that the school context has never been of more importance when understanding the development of ECTs.

This research will provide an important insight into how the introduction of the ECF affects the identities of mathematics ECTs. This early stage in a teacher's career is crucial for researchers and government bodies to understand if the recruitment and retention of secondary school teachers is to improve. The recruitment of secondary mathematics teachers has been below target since 2014 (Worth & Van den Brande, 2019) and while ECTs are the teachers most likely to leave the profession, leaving rates for mathematics ECTs are amongst the highest of any subject (Worth & De Lazzari, 2017).

My ongoing research therefore seeks to answer the following questions: 1) what are the influences on ECTs of mathematics' developing identities over the two years of their induction to the school? 2) how does context shape the teacher identities of ECTs of mathematics? 3) how do teachers' experiences with mathematics influence the development of a teacher identity?

Theoretical framing

As ECTs are socialised into their schools, membership in communities of practice (Wenger, 1998) allow them to negotiate the meanings of their experiences and help build an identity. In these socially and culturally constructed realms, or figured worlds, ECTs negotiate their identities through participating in the "coproduction of activities, discourses, performances, and artifacts" (Holland et al., 1998, p. 51). Such situated theories, by focusing on the examples of participation that constitute learning, are useful for my study because they help gain insights in the emerging identities of teachers as ECTs are *becoming* a part of their community of practice.

Becoming a teacher demands significant personal investment, both of time and energy. It is also a period of intense identity negotiation. ECTs enter the profession with an identity which is strongly embedded (Flores & Day, 2006); they have a clear image and an ideal of what it means to be a teacher. This ideal, or designated identity, can influence ECTs' actions, and they may be disappointed if there is a perceived persistent gap between their current and ideal identities. This ideal may also be challenged by their workplace context, either positively or negatively, and ECTs therefore have to reconstruct their professional identities accordingly.

Establishing what impacts on a strongly embedded identity has prompted some studies to look explicitly at past experiences of school mathematics (de Freitas, 2008; Flores & Day, 2006) and conceptions of what it means to learn mathematics (Ma & Singer-Gabella, 2011). This recognises that mathematics teachers' experiences as learners and doers of mathematics

is vital to understanding their teacher identity. By paying attention to ECTs' past experiences and beliefs, it becomes possible to consider whether their start to teaching is as they had imagined, and how their experiences in school and classroom contexts have shaped or challenged their beliefs.

My initial literature review shows that the majority of studies utilise a sociocultural perspective, thereby responding to Lerman's (2000) call for a theory which equates learning with developing an identity in communities of practice (Lave & Wenger, 1991; Wenger, 1998). While this perspective is useful for my own study, as it focuses on the impact of social practices and context, I still appreciate that an individual's inner world is of importance. The individual emphasis alongside the social context would require a psychosocial approach and is used by far fewer researchers (for example Boylan & Woolsey, 2015), but offers a potentially more balanced approach. I consider the applicability of this approach through reflections on the pilot study.

Proposed methodology

In order to explore the identities of ECTs of mathematics, teachers' stories of their experiences will be collected to help develop a narrative study. In doing so, I equate these stories themselves with the identities (Sfard & Prusak, 2005). In sharing their experiences, I hope to allow participants the opportunity to reflect as they interact with the people and norms of their school context. Narratives allow me to explore the interaction of factors which contribute to a teacher's identity and look for any features in the teachers' narratives which demonstrate identity negotiation.

Final reflections

Identity in mathematics education research is useful as a way of understanding both individuals' experiences of teaching and learning mathematics and wider issues of context, social interactions and power dynamics (Darragh, 2016). My study will collect the stories of ECTs, which provide rich data about the process of *becoming* a mathematics teacher in a particular context. These stories can provide the means to effectively support ECTs to critically reflect on their learning and promote teacher agency throughout their early professional learning. By exploring the emerging identities of ECTs of mathematics, my study will make an important contribution to understandings of mathematics teachers' negotiations at a time of significant policy shifts.

In this presentation I will discuss my emerging theoretical framework, reflections on method(s) used in the pilot study and consequences for the main study and any further research.

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