Exploring and Mapping Sociomaterial Practices and Experiences of Graduate Teaching Assistant (GTA) Development through Actor-Network Theory

Alexander Vaniev
University of Glasgow, Glasgow, United Kingdom

Research Domains

Postgraduate scholarship and practice (PGSP)

Abstract

This paper explores how Graduate Teaching Assistants (GTAs), or doctoral researchers on casual contracts, develop their teaching practice in UK universities. Despite contributing significantly to undergraduate teaching, GTAs are rarely treated as equal teaching partners, facing challenging early teaching experiences, a lack of preparation and support, and inadequate workloads. This study adopts a sociomaterial perspective of Actor-Network Theory to trace how interactions of human and non-human (f)actors, e.g. peer networks, learning technologies, or spaces, shape the development of GTA practice. Using longitudinal ethnographic methods targeting six GTAs across two institutions and employing Visual Network Analysis to illuminate everyday networks they navigate, the research highlights particular sociomaterial practices that contribute to or impede teaching development. This paper argues for more comprehensive and inclusive practices and institutional policy to support GTA development and contributes to more collegial and caring academic communities that value and invest in those who support teaching delivery.

Full paper

Introduction

Doctoral researchers play a key role in supporting UK higher education teaching, often taking on Graduate Teaching Assistant (GTA) roles that typically imply marking assignments, providing student feedback, or leading tutorials. UK universities heavily rely on part-time teaching staff, such as GTAs, to conduct 25-50% of their undergraduate teaching (UCU, 2018). Indeed, employing PhD students on hourly paid contracts is a standard, cost-effective university practice that allows admitting and teaching large cohorts of students (Park & Ramos, 2002), reduces academics' teaching workload (Chadha, 2013; Muzaka, 2009), and provides a valuable paid developmental opportunity for doctoral students (Neves, 2024).

Nonetheless, GTAs experience various issues in their work. GTAs are rarely treated as equal teaching staff colleagues (Slack & Pownall, 2023), their workload and remuneration are often inadequate (Jordan & Howe, 2018; Raaper, 2018; UCU, 2020), and they receive disproportionately less teaching support and training than permanent staff, which is also fragmented and inconsistent across the sector (NUS, 2013; Rao et al., 2021). Their early teaching experiences are challenging, often marked by stress, uncertainty, and limited preparation (Collins et al., 2022). However, contemporary scholarship still theorises GTA roles as fluid, flexible, agentic, and socially situated (Bale & Anderson, 2024; Quirke & Standen, 2025; Winstone & Moore, 2017).

While the previous studies focus extensively on GTA experiences, benefits/challenges, and identity negotiations, they use limited theoretical perspectives to understand better how GTA agency and development look in practice, ignoring the contextual (f)actors and sociomaterial conditions in which GTAs operate or interact with, such as tools, technologies, spaces, texts, or objects.

This study presents a novel, more-than-human perspective on GTA development employing a sociomaterial approach to examine GTA training and practice and explore the following research questions:

- **RQ1.** How is the teaching development of GTAs experienced and practised?
- **RQ2.** What sociomaterial (f)actors contribute to the teaching development of GTAs, how are those interrelated, and what effects do they produce?

Theory

The sociomaterial paradigm focuses on how constituent interactions among humans (social) and non-humans (material) produce specific practices that enact social reality. By taking "practice" as a unit of analysis (Moura & Bispo, 2020), sociomateriality illuminates the everyday materiality often overlooked in anthropocentric educational research, offering a deeper insight into messy and complex educational practices (MacLeod & Ajjawi, 2020).

This sociomaterial study employs Actor-Network Theory (ANT), which claims that human and non-human *actors* have an equivalent (or symmetrical) capacity to exert agency (Latour, 2005). ANT views educational practices as fluid and contingent *actor-networks* that come into being through *translation* (Callon, 1986), producing relational *network effects* such as knowledge, identity, power, development, or experience (Law & Hassard, 1999). ANT provides a robust framework and a methodological toolbox to trace how dynamic webs of heterogeneous actors translate (or not) into GTA teaching development.

Methodology

This continuing ANT-based study adopts a longitudinal ethnographic methodology (Fenwick, 2010) that helps to "follow the actors themselves" (Latour, 2005, p. 12) and trace how the existing sociomaterial practices of GTA training and work - materialising both in physical and virtual spaces - translate into GTA development (or not). The data collection spanned one academic year across two distinct UK universities and implied various ethnographic qualitative research methods, such as participant mapping interviews, diaries, and observations. Due to the diverse range of methods employed and the high participant workload, the sample for this qualitative study included six GTAs (N=6) from different disciplines.

Throughout the study, GTAs logged diary entries related to significant moments in their learning-to-teach journey, sharing insights through text, imagery, and audio/video recordings. During the semi-structured mapping interviews, GTA participants created or revised individual mind maps that included people and things they interacted with that informed their teaching practice. Observations of participant interactions complemented the interviews and diaries and helped triangulate the generated data.

As this is a work-in-progress PhD research, all data will be analysed and represented with visual network analysis (Decuypere, 2020). The diversity of research methods is expected to elicit thick descriptions and link rich data across geographical spaces and times, offering a more nuanced perspective of "experiencing" and "practising" teaching development.

Expected outcomes

The expected findings are likely to reveal new insights into the strategies that UK GTAs employ in learning to teach in academia, showcasing that teaching development is a non-linear, messy, highly networked, and materially embedded process, where the teaching background, interests in teaching, academic practice, collegial support, training, and use of tools are inseparable.

Ultimately, this work aspires to advance theoretical understanding and practical strategies for supporting GTAs, ensuring their teaching development is better integrated and valued in academic communities.