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The Policy and Practice of Mathematics Mastery: The Effects of Neoliberalism and Neoconservatism on Curriculum Reform

[1]Nick Pratt, &
[2]Julie Alderton
[1]Plymouth Institute of Education, University of Plymouth, Plymouth, UK
[2]Faculty of Education, University of Cambridge, Cambridge, UK

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Abstract

This paper explores how the twin processes of neoliberalism and neoconservatism work together on, and through, curricula and their associated pedagogies. It bridges the gap between policy and classroom practice, focusing on the particular example of the school subject of mathematics and the notion of mastery, operationalised in the English education system as Teaching for Mastery (TfM). From this context, it develops a theoretical argument using Dean's analytics of government as part of a broader Foucauldian frame, to analyse how TfM is constructed as a particular policy truth. It then shifts the analysis from a wide, social one to the individual classroom level using a psychological argument to critique TfM in its own terms, examining the onto-epistemological nature of mathematics as a subject. In doing so, it explores ways in which mastery might be problematic in classrooms, even whilst appearing to offer a solution at policy level to long-standing problems in English schooling. The aim is not to suggest that TfM has nothing to offer, but to point to ways in which it draws on the psychology of teaching and learning in a very particular manner, inscribing pupils with very specific mathematical subjectivities. By providing this insight into how neoliberal policy positions play out at practitioner level via curricula and pedagogies, the paper raises questions which are philosophical, political, and ethical, regarding the potential effect of TfM on teachers' and pupils' experiences of mathematics in schools, including implications for equity of this experience amongst the latter.

Keywords:
Sanalytics of Government, Mathematics, Neoliberalism and Neocon-Servatism, Teaching for Mastery

Corresponding Author:
Nick Pratt

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Background to the Study

Education in England is largely dominated by a culture of testing and accountability aimed at raising scores in national standardised examinations (for example, Connell, 2013; Keddie, 2016; Pratt, 2016). In this sense, it is not unique since such systems are becoming commonplace through global education reform (see, for example, Sahlberg, 2007). Nonetheless, England leads the way in terms of adapting its education system to processes of neoliberalism—where this term 'broadly means the agenda of economic and social transformation under the sign of the free market' (Connell, 2013, p. 100) and where 'the role of the state is to create and preserve an institutional framework appropriate to such practices' (Harvey, 2007, p. 2). For education in England, such a transformation has been happening since at least the early 1990s. Under John Major's Conservative, and then Tony Blair's New Labour, governments schooling has progressively been organised around competition and market forces; the implication being that a neoliberal market will equalise the spread of opportunity to all and 'close the gap' between the highest and lowest attaining students.

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Since pure neoliberalism is based on a belief in individual interests and market freedoms, it tends to lead to an increase in inequality, as those who are 'successful' accumulate more and more. For this reason, neoliberalisation is often associated with controlling discourses: authoritarianism, in some cases, but more usually neoconservatism in democratic societies (Apple, 2004; Harvey, 2007). Neoconservatism acts alongside neoliberalism in two ways: first, 'in its concern for order as an answer to the chaos of individual interests' (Harvey, 2007, p. 82)—in this case the competitive interests of schools, teachers (see, for example, Pratt, 2016, 2018) and commercial educational suppliers (Ball, 2004); and second, in the way it 'seeks to restore a sense of moral purpose, some higher -order values that will form the stable centre of the body politic' (Harvey, 2007, p. 83). Such conservatism has been strongly apparent since the 2010 Conservative/Liberal Democratic alliance, and even more so in consecutive Conservative-majority governments thereafter. To give a flavour of this combination, we note an example: the introduction in 2019 of a 'tables check' for all 9 -year-olds 'to help ensure children in primary school know their times tables up to 12 off by heart' (Department for Education, 2018).

We do not dispute the need for young people to be able to fluently recall or calculate multiplication and division, but this has been enshrined in the English National Curriculum since its inception some 30 years ago. Several points strike us about the introduction of this 'check', therefore. To begin with, its neoliberal roots are illustrated in its competitive economic language; the claim that it will 'continue to improve academic standards in order to deliver a truly world-class education' and 'make a positive contribution to the government's commitment through the Industrial Strategy to drive up the study of math's (ibid.). Moreover, the idea of academic standards is constructed through comparison with other countries (especially Singapore) and in order 'to close that gap and raise national standards in mathematics' (ibid.). However, its conservatism is illustrated in several ways too. First, it checks 'times tables up to 12 off by heart', rather than to 10×10 which is the mathematically more sensible since beyond 10 partitioning allows tables to be combined.

Conclusion

In this paper we have shown how TfM, articulated through various curriculum guidance documents and recommended forms of teaching, produces a particular logic of practices. In particular, we have focused on two key aspects of TfM: that teaching can be adapted to ensure all children can access mathematical ideas if they are carefully sequenced and organised; and that children can also be assessed closely enough to therefore know when they are ready to progress to the 'next' idea. However, as noted in the last section, from the psychological framework within which Anglo-American schools generally interpret teaching and learning, there are some important questions to ask about the veracity of these logics, given Sfard's argument about the ontological dilemmas of concept development. In this final section we want to expand our argument back to the wider social plane to consider the kinds of effects that TfM might be having on teachers and pupils in English schools.

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