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The politics of curriculum remodelling: the case of GCSE mathematics

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Background

Following the recommendations of the Smith report (2004) the Curriculum and Qualifications Development Authority has been leading the implementation of a process of curriculum remodelling, aiming to develop coherent mathematics learning pathways for all learners in the 14-19 age range. This major project has been conducted in three phases: 1) design of curriculum models, 2) piloting of assessments based on new models, and 3) a national evaluation of piloting.

Through our evaluation activity we have become interested in how various groups and individual stakeholders are positioned in the ongoing developments. These points and angles of view expose contested notions of what GCSE mathematics should look like and what it should assess. Different values (not clearly audible in policy discussions) are brought to bear on the debate by these stakeholders and this paper seeks to explore how these positions help to structure what is considered desirable, and becomes possible, in school mathematics.

Research Questions

The paper will analyse this process of policy recommendation (in the Smith report), curriculum modelling, assessment development and evaluation. It is necessarily a snapshot in time of this reform programme as there is no lull in the policy machine which has brought sustained change to mathematics education in England over many years. That said, it is the very process of change that exposes the positions and values of individuals and groups thus allowing us to develop this analysis.

Many important decisions for mathematics education are made by people who are distanced from school classrooms but who rely on the advice of others. Civil servants and politicians have to work within their own political agendas and these positions are strong ones predicated on particular values and understanding of the function of schools, the purpose/value of mathematics and notions of quality and equity. It is clear that higher education institutions, employers, government, teacher associations and learners expect different things from mathematics education. Ernest's (1992) analysis of the contestation over the establishment of the National Curriculum is still relevant here. Alongside a consideration of these influences it is important to remember that this reform programme is not taking place in isolation. Wider changes taking place in schools generally, and in the 14-19 age range in particular, steer future possibilities for school mathematics.

In all of this we want to explore why change is so difficult and consider whose notion of equity and quality takes precedence in the decision making process. Any such analysis must include the influential role of the awarding bodies who compete in the market of high stakes assessment. The relationship between policymakers and these companies is not always made explicit but needs to be understood since assessment regimes strongly frame what happens in mathematics classrooms.

Methods

In order to explore these issues we will begin to map out the positions of stakeholders in mathematics education in England in order to understand how curriculum and assessment get shaped, and undergo (limited) change, through a national reform process. Our focus is on the first attempt to establish a new qualification for 16 year olds where students can get two mathematics GCSEs where they have traditionally only obtained one. Our data (broadly understood) arises from the QCDA-funded Evaluating Mathematics Pathways project.

Frame

The paper draws on Ball's analysis of neo-liberal education as framed by markets, managerialism and performativity (2003) to consider how the fields of politics, education, mathematics (as part of STEM) and the economy intersect in the struggle for what happens in GCSE mathematics curriculum and assessment. This analysis necessarily draws upon the theory of practice developed by Bourdieu (1977) for whom social fields represented power relationships (rather akin to a magnetic field) which tend to maintain the stasis of power hierarchies and positions.

Research findings

The mathematics education 'community' includes an arguably unique and potent mix of interest groups and yet there is little sociological analysis of how these groups interact to shape policy, advice and practice. This sociological analysis aims to develop theoretical understanding of the field in order to help us understand the current trajectories in policy and practice. This is not only a national concern but there is a dearth of policy sociology that focuses on what is a critical and centrally important school subject for education systems across the world.

References

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