

FROM POLICY TO PRACTICE: DISCOURSES OF MASTERY AND “ABILITY” IN ENGLAND

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Abstract: Recent policy discourse in England has adopted “mastery of mathematics” as a desired aim and approach to teaching, yet this is understood in a variety of ways. One key component of the official discourse is the claim that mastery will enable ALL pupils to achieve and move through the curriculum together. This paper explores the ways in which this claim is recontextualised in the discourses of agencies involved in teacher professional development.

INTRODUCTION AND BACKGROUND

Recent changes to the curriculum and official policies in England attach strong value to the term “mastery” both as an objective for pupil learning and as an approach to pedagogy. This value is being carried through into practice by initiatives, some funded by government sources and some independent, including programmes of teacher professional development and the development of new textbooks, all of which are labelled with the term. There is, however, some lack of clarity about the nature of mastery and the pedagogy that might support it. This is evident in a number of recent publications providing critique (e.g. Wells, 2016) and pointing to common “misconceptions” (National Association of Mathematics Advisers, 2015).

Official rhetoric (emanating from government sources and echoed in the popular media) associates the introduction of mastery with learning from jurisdictions that have performed well in international tests. In particular, the government has funded a programme of teacher exchange visits with Shanghai and is supporting the development and dissemination of textbooks for primary schools based on those used in Singapore and is using ideas about the pedagogy in these countries in forming the recently revised National Curriculum and other policy initiatives. It thus appears that the UK government is attempting to make use of international test outcomes in order to inform policy making, although it is worth asking whether it is developing new policy ideas on the basis of analysis of the new knowledge produced by TIMSS and PISA or whether it is, like the policy discourses studied by Pons (2012), drawing on these studies as a rhetorical strategy to strengthen an existing positions in the policy debate.

The difficulties and dangers of adopting practices from other countries without paying due attention to cultural differences have been pointed out elsewhere (e.g. Clarke, 2002). It is also over-simplistic to draw conclusions about causal relationships between particular features of an education system and student

performance. In this paper, however, my intention is not to provide another critique of UK government policy but to understand how ideas of mastery are transformed as they move between fields – between research, policy and practice.

In the context of an earlier policy reform in England, involving changed approaches to assessment, Morgan, Tsatsaroni and Lerman (2002) drew on Bernstein's (1990) notion of recontextualisation in order to understand how teachers' practice in implementing the reform was shaped by the various official and unofficial discourses about mathematics, pedagogy and assessment. Bernstein describes the movement of discourse from the field of production into the field of reproduction, the school, through a process of transformation within the recontextualising field. Mathematical and pedagogical knowledge and theory are originally formed in the field of production, the academy, but their presence in teachers' practice is mediated by curricula, assessment regimes, textbooks, policy, guidance and training – discourses formed by selecting and transforming elements of the original discourse and combining these with elements of other discourses in order to suit them for their new practical pedagogic purpose. The production of these recontextualised discourses is the work of a range of agents and agencies (governments, teacher educators, publishers, etc.) each with their own interests. The study developed by Morgan, Tsatsaroni and Lerman took teachers' discourse as its starting point and sought to trace its discursive elements back to their sources. In the present paper, the focus is on the ways in which the discourse of the “mastery” reform is constructed by various recontextualising agents and agencies. This will enable exploration of the discursive resources that may be available for teachers to draw on in order to “perform” mastery in the classroom.

As Lerman and Adler (2016) demonstrate, action in the field of recontextualisation is complex: they map the various sources drawn upon by policy-makers as they produce the official discourse of educational policy. However, the action of schools and teachers in the field of reproduction is not only directly regulated by government policy but is also shaped by the transformations of official discourse into resources and guidance for practice produced in the Pedagogic Recontextualising Field (PRF). The PRF itself comprises two sub-fields: the official (OPRF), which is directly regulated by the state, and the unofficial (UPRF), whose agents and agencies have some degree of autonomy.

As has been identified elsewhere (Wells, 2016), the various recontextualising sub-fields draw on discourses from several sources within the field of production of educational theory. The term “mastery” itself is often traced to Bloom; the concrete-pictorial-abstract pedagogy incorporated in the officially endorsed pedagogy in Singapore draws on Bruner; academic discussion of pedagogy in Shanghai and other Confucian-tradition jurisdictions makes use of the notion of variation, aligning itself to some extent with Marton's variation theory, though developed independently and with some cultural differences (Sun, 2011). My concern is to map the ways in which elements of these discourses and of others have been selected, transformed and

combined to produce messages for mathematics teachers in England to guide and regulate their practice. In this paper there is space only to consider a small subset of discursive elements as explained below – those elements concerned with “achievement for all” and notions of “ability”

METHODOLOGY

The data are the texts of public domain documents chosen to represent the official and unofficial discourses of mastery produced in each of the ORF, OPRF and UPRF. They are published by three agencies, each forming part of one of these fields:

1. the government *Department for Education* (DfE) – an agency of the Official Recontextualising Field (ORF)
 - 1a the statement of aims of the Mathematics National Curriculum for primary schools (extracted from Department for Education, 2013). While produced before the explicit policy turn to mastery, the official discourse claims that it is nevertheless a “mastery curriculum”.
 - 1b a press release reporting the announcement by the schools minister Nick Gibb of funding for schools to introduce mastery: *South Asian method of teaching maths to be rolled out in schools*
 - 1c the text of a speech by Nick Gibb in 2014: *Nick Gibb speaks to education publishers about quality textbooks*
2. the *National Centre for Excellence in Teaching Mathematics* (NCETM). The NCETM is directly funded by the DfE and is currently charged with coordinating professional development for teachers and dissemination of the official version of mastery. It may thus be seen to be part of the Official Pedagogic Recontextualising Field (OPRF), converting policy texts into texts that aim to shape pedagogy directly.
 - 2a *The Essence of Maths Teaching for Mastery* – a summary of key principles of mastery
 - 2b *Meeting the needs of all without ability setting*
 - 2c *Using a high quality textbook to support teaching for mastery*2b and 2c are “case studies”, each describing how a school is introducing key aspects of mastery
3. *Mathematics Mastery* (MM). MM describes itself as a professional development programme for teachers. It operates as part of Ark, an educational charity responsible for a chain of academy schools in the UK. These schools are all expected to follow the curriculum and pedagogic approach designed by MM. Other schools, not part of the Ark academy chain, may also buy into the MM training and materials. Founded in 2009, MM predates the adoption of mastery into the official policy discourse. As will be seen in the analysis below, there are tensions, in some cases made explicit, between the discourse

of MM and the discourses of the DfE and NCETM. MM is independent of the government and hence forms part of the Unofficial Pedagogic Recontextualising Field (UPRF). Because of the scale of its resources and its institutional position it has a widely recognized public presence.

3a *What is the Mathematics Mastery approach?* – a summary of the key principles of MM

3b *Mastery – facts, fictions, fashions and fads*

3c *Textbooks – A useful piece of the puzzle?*

Texts 3b and 3c are blogs posted by senior officers within MM, explicitly engaging with the official discourse of mastery.

Apart from 1a, the texts were accessed from the internet during July 2016. They were selected to enable comparison of the treatment of key themes across the fields.

These sources clearly do not encompass the full variation in current discourse about mastery. In particular, social media afford opportunities for individuals, including teachers themselves, to contribute to public communication about policy, without the support of the resources of an official or non-governmental agency. Such blogs, tweets, etc. are often oppositional, constructing and critiquing a particular version of mastery and often advocating an alternative pedagogy.¹ Such texts are also products of the UPRF and analysis would provide further insight into some of the possible forms of compliance and opposition, but this is beyond the scope of the current paper.

The approach to analysis focuses on how the texts function ideationally – what version of the world do they construe? In particular, what are the characteristics of mastery, of pupils and of teaching and what actions are involved in performing mastery in the classroom? An initial process of open coding was conducted, supported by nVivo. Clusters of codes were generated and refined, identifying utterances related to each of these questions as well as others that emerged during the coding process.

Given the limited space in this paper, I shall focus on just one cluster of issues emerging from the data: the idea that pupils are different, achieve differently and/or should or should not be taught in different ways or even in different groups. This has been an on-going source of debate in the United Kingdom for many years. As recently as 2014, reports in the media suggested that the ruling Conservative Party was about to make it compulsory to teach all secondary school pupils in “ability groups” (Paton, 2014). Although the government distanced itself from this rumour, many secondary and primary schools nevertheless increased their use of such grouping. Since the official adoption of mastery, however, the idea that pupils with

¹ Established examples include: <http://www.inquirymaths.com/posts/inquiryandmastery> and <https://tothereal.wordpress.com/2015/04/29/why-this-post-is-wrong-and-dangerous-response-to-mastery-overload/> (both accessed 1/9/2016). There are also many less formal and more ephemeral examples.

different levels of attainment should be taught separately and differently has been replaced by emphasis on achievement for all pupils. This is evident in the texts produced in all three fields:

The maths mastery approach is marked by careful planning, ensuring no pupil's understanding is left to chance. (ORF)

Mastery is something that we want pupils to acquire, or rather to continue acquiring throughout their school life. All pupils. (OPRF)

Our approach is designed to enhance understanding and enjoyment, as well as raise attainment for every child. (UPRF)

These three examples are all included within the “ability” cluster because they directly refer to achievement (understanding, mastery, enjoyment, attainment) for *all children*. Other sub-codes within this cluster referred to the identification of different groups of children classified by attainment or ability (e.g. “learners who struggled”, “the most able”) and to organization of teaching for children of different “abilities”, including: *acceleration, differentiation, keeping together, keeping up and setting*.

While statements about this topic occur in texts from all three agencies, in order to map the recontextualisation of mastery across the ORF, OPRF and UPRF it is necessary to look in more detail at the kinds of messages produced in each field. Having extracted all statements coded in the ability cluster, the next stage of analysis started at the level of the clause, identifying in each case who or what are the actors in what kind of process. This laid the groundwork for looking at semantic patterns reoccurring within each set of texts and across the texts as a whole. For this, I have adopted a version of Lemke's thematic analysis (Lemke, 1983), simplified to consider only the transitivity system of actors, processes and circumstances. This form of analysis identifies common semantic structures through the cohesive devices present in the text. A common structure may be detected not only in the direct repetition of specific actor/process relations but also in lexical covariation, such as the presence of synonyms, and in grammatical transformations of similar relationships. (See Morgan (2016) for a detailed account of this method applied to official texts constructing “good practice in mathematics teaching”).

For example, across the texts of the ORF, the following statements exemplify a common semantic structure, ascribing agency to curriculum, teaching approaches, textbooks or other resources, all of which are said to “ensure” some form of achievement for all pupils:

The national curriculum for mathematics aims to ensure that all pupils become fluent in the fundamentals of mathematics

careful planning, ensuring no pupil's understanding is left to chance

textbooks are used [...] to ensure that all pupils [...] achieve

The semantic pattern evident in these statements is summarised in the theme:

TEACHING/CURRICULUM/RESOURCE ENSURES ACHIEVEMENT FOR ALL

The analytic process seeks to identify such themes within the texts produced in each field and to examine relationships between the themes across the three recontextualising fields.

ANALYSIS

The number of statements in each text coded to “ability” or one or more of its sub-codes is summarised in Table 1. This gives an indication of the universality of reference to this construct but does not give a reliable indication of the degree of emphasis as the texts vary in length and in their main focus. For example, text 2b, with 17 statements coded as referring to ability, presents a case study of a school that had recently stopped grouping pupils by ability, while text 3c, with only two such statements, discusses the use of textbooks.

Table 1: Statements coded as "ability"

Field	Text	Number of statements coded to “ability”
ORF – DfE	1a	4
	1b	1
	1c	4
OPRF – NCETM	2a	5
	2b	17
	2c	5
UPRF – MM	3a	10
	3b	6
	3c	2

Semantic patterns of the ORF – DfE texts

Within the texts of the ORF the analysis identifies two main types of semantic pattern. The first type ascribes properties and actions to pupils:

PUPILS ACHIEVE As seen in the extracts shown above, achievement may be taken to include fluency, understanding, “grasp of the fundamentals” and possibly other, unnamed, outcomes. This action is consistently qualified as for ALL pupils.

PUPILS MOVE THROUGH THE CURRICULUM While this appears closely related to the notion of achievement, it has the additional metaphoric content of movement, which may vary in speed. This action is qualified in possibly contradictory ways. On the one hand ALL pupils “keep up”. On the other hand we are told that only “the majority move at the same pace”, while even those pupils who have already achieved

understanding “should not accelerate”. There is no explicit identification of any group of pupils who do not move at the same pace – presumably more slowly (hence not “keeping up”).

The second type of pattern ascribes agency to teaching approaches or actions (though not to teachers), to official instruments (curriculum and examination regimes) or to textbooks or other teaching resources. As shown in the previous section, one such pattern is summarised in the common theme:

TEACHING/CURRICULUM/RESOURCES ENSURES ACHIEVEMENT FOR ALL

There is, however, also a complementary theme that picks out “the most able” pupils for special treatment:

TEACHING/CURRICULUM/RESOURCES CHALLENGE **SOME** PUPILS

Semantic Patterns of the OPRF – NCETM texts

In the texts produced by the OPRF, we again find the themes:

(ALL) PUPILS ACHIEVE

and

PUPILS MOVE THROUGH THE CURRICULUM (TOGETHER)

There is no suggestion in this case that some would move at a different pace but there is consistent emphasis on no pupil being left behind. As in the discourse of the ORF, agency is ascribed to teaching approaches, though not specifically to the curriculum or resources (and without the certainty of “ensuring” achievement):

TEACHING
BENEFITS ALL
PUPILS

Specific benefits are identified for HIGH ATTAINING PUPILS: they are themselves ascribed agency in relation to mathematics as they:

DEMONSTRATE DEEPER UNDERSTANDING
ENJOY LESSONS MORE

than previously. The benefits for other groups of pupils are not identified separately.

Unlike in the ORF, teachers themselves are ascribed agency and this agency acts differently for different groups of pupils:

TEACHERS CHALLENGE HIGH ATTAINING PUPILS

TEACHERS SUPPORT LOW ATTAINING PUPILS

Whereas the policy discourse of the ORF picked out higher attaining pupils for special attention, it did not suggest that others might need support.

Another feature of the OPRF is the construction of contrast with the past, challenging perceived obstacles to the mastery approach.

Maths teaching for mastery rejects the idea that a large proportion of people ‘just can’t do maths’.

“We had traditionally taught ability sets in Years 5 and 6 for many years, believing that the gap was so vast by this point we couldn’t conceivably support and challenge children in mixed ability classes.”

This use of contrast is a feature of a persuasive rhetoric. Whereas the policy discourse has a more absolute modality, stating how things should be in a way that excludes any possible challenge, the NCETM texts recognise and reject possible objections to the changes it is tasked with implementing. Another rhetorical device employed to counter objections is the recruitment of teachers’ voices, as in the second extract above. The case studies in texts 2b and 2c both include quotations from teachers, claiming that implementing the mastery approach has overcome their own past objections and those of their colleagues.

Semantic patterns of the UPRF – MM

The discourse of the UPRF repeats the basic theme that:

PUPILS MOVE THROUGH THE CURRICULUM (TOGETHER)

It also echoes the ORF claim for the mastery teaching approach:

TEACHING ENSURES ACHIEVEMENT FOR ALL

The notion of CHALLENGE is also present, though here it differs from the discourse of the other two fields in that “students of different levels of attainment” are all to be challenged, not only those who are identified as high attaining or high ability:

TEACHING CHALLENGES ALL PUPILS

Indeed, these texts construct an oppositional discourse about ability, challenging the idea that pupils can be labelled by their ability:

We believe our ‘abilities’ are neither fixed nor innate, but can be developed through practice, support, dedication and hard work.

Whereas the ORF and OPRF both construct a model of mastery in which, while all achieve, those identified as higher attaining or higher ability achieve more (greater depth of understanding, enjoyment, meeting challenges), the UPRF explicitly extends these additional benefits to all pupils:

All learners benefit from deepening their conceptual understanding of mathematics, regardless of whether they’ve previously struggled or excelled.

Unlike the teachers’ voices in the OPRF texts, those UPRF texts chosen for analysis here do not engage directly with the practicalities of classroom implementation. They do, however, refer to other texts, “our curriculum structure, our coaching and depth materials”, that are claimed to “enable teachers to plan for those at different levels of attainment”.

DISCUSSION

The analysis of texts from each of the three recontextualising fields identifies common themes, characterising “mastery” as involving achievement for all pupils, moving through the curriculum at the same pace. The notion of challenge also appears across all three.

As might be expected, the OPRF draws closely on the official policy discourse but transforms it in ways that reflect the NCETM role in transforming policy into forms that can be taken into the classroom. An important aspect of this is the ascription of agency to teachers themselves; this reflects the fact that a major role of the NCETM is to disseminate messages to teachers that will enable them to transform policy into practice. The different teacher actions construed in relation to higher and lower attaining pupils – “challenge” and “support” – draw on widespread pre-existing discourses of ability and work with the rhetoric of contrast with the past to persuade teachers that achievement for all is possible.

Interestingly, the message of challenge for high attaining pupils is especially strong in both the ORF and the OPRF. Text 2b provides a hint of the interests that may lie behind this, quoting a teacher in a primary school that had abandoned ability setting:

“It was an unpopular move with a handful of parents at first; however, we have been careful to ensure the most confident children are always challenged and engaged in class and so any resistance was short-lived.”

Vocal (and probably mainly middle class) parents not only pressurise individual schools but are also likely to be seen by the government as an important constituency that needs to be persuaded that the new policy will benefit their children.

In contrast, the discourse of the section of the UPRF considered here explicitly displays its autonomy, construing Mathematics Mastery to involve challenge for all pupils and positioning itself in opposition to the notion of “ability” used in the official discourses. As noted earlier, the Mathematics Mastery organisation pre-dates the policy adoption of mastery and it appears to be struggling to defend a claim to “own” the term. Although it reaches out to all schools, MM has a power base in the Ark academy chain which imposes common policies and practices that may differ to some extent from those current in other types of school. Evaluation of the first year of an attempt to disseminate the MM approach to other secondary schools identified a perceived lack of support for lower attaining pupils as a problematic issue for teachers outside the Ark chain (Jerrim et al., 2015).

The question of how teachers may interpret and adapt these discourses of mastery in the context of their practice is yet to be investigated. In this paper I have only presented analysis of the presence of one construct, “ability”. There is a long history of use of this construct in England to differentiate educational provision for different groups between and within institutions and classrooms. It remains to be seen how the core message that ALL PUPILS ACHIEVE and the varying messages about

challenge are recontextualised in the field of reproduction as teachers draw on new and existing discourses in order to form their classroom practices.

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