

‘Mastering’ the Curriculum

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Education discourses and regulatory teaching standards governing pre-service teachers’ entry into the profession produce ambivalent conditions for how student teachers conceptualise the curriculum. The notion of mathematics mastery has been reactivated as a nodal orientation of collectively articulated ambitions in some quarters. I start from the premise that these motives are located within particular discourses: the need to comply with new directives, to achieve outstanding status, educate or get educated, and so forth. In this paper, I explore the discursive construction of the mastery curriculum with reference to Lacan’s notion of the master signifier. This analytical tool provides a framework for addressing the multifaceted discursive encounters towards disrupting habitual thinking patterns and opening alternative interpretations.

Keywords: mastery; Lacanian discourse analysis

The ‘mastery curriculum’

As in many countries, recent mathematics education reform in England has been informed by evidence from high-performing jurisdictions, in particular Shanghai. Although the word ‘mastery’ does not appear in National Curriculum documents, the influential government-funded National Centre for Excellence in the Teaching of Mathematics (NCETM) has adopted the word ‘mastery’ in relation to observations of mathematics teaching and learning practices in Shanghai (NCETM, 2016). The NCETM describes mastery of mathematics as a ‘deep, long-term, secure and adaptable understanding of the subject’ (NCETM, 2016). Alongside the NCETM, there is an organisation, Mathematics Mastery, linked to the Ark Academy chain of schools in England that has a similar ideological position. The Director of Mathematics for the Ark Academy chain describes mastery, ‘in mathematics, you know you’ve mastered something when you can apply it to a totally new problem in an unfamiliar situation’ (Drury, 2014, p.8).

The widespread use of the word mastery is relatively new to the teaching and learning of mathematics but its origins can be traced to the work of Benjamin Bloom in 1968 (NAMA, 2015). Bloom’s educational philosophies are being incorporated by the current trend of mastery teaching, for example, requiring that pupils achieve a level of mastery in prerequisite knowledge before moving forward to learn subsequent information (Bloom 1968). Skemp’s (1976) work on procedural and conceptual understanding in mathematics retains currency in the ongoing debate about the mastery curriculum. Mathematics Mastery Director, Ian Davies, asks the question, ‘But don’t knowledge and procedural fluency come first?’ (2015). Davies encourages ‘intelligent practice’ to enable pupils to develop conceptual understanding. This approach is similar to the one characterised by the NCETM, mastery teaching is, ‘underpinned by methodical curriculum design and supported by carefully crafted lessons’ and ‘practice and consolidation play a central role’, but this carefully prescribed method of teaching could deny pupils agency. It is the teacher who defines the pace and challenge of the lesson. Such passivity, in which students have no

responsibility for their own learning, is the opposite of a growth mind set (Blair, 2015). What is clear, is that there have been numerous mastery approaches in the last 40 years and they elude a single definition (NAMA, 2015).

Method

Student teachers (10) were observed in schools (4) and semi-structured interviews were conducted, lesson plans analysed and pieces of reflective writing were scrutinised. The interviews were designed to assess how student teachers conceptualised the mastery curriculum. Transcripts were produced for inspection and Nvivo coding was used to analyse the data and notice themes.

A psychoanalytical inquiry of student teachers' development

It is quite an audacious claim that you have mastered something. When can you claim you have mastered fractions, for example? Drury (2014) suggests that mastery occurs when you can apply it (fractions) to a totally new problem in an unfamiliar situation. For many contemporary theorists, like Jacques Lacan, however, there is 'no universe of discourse' (Lacan in Neill, 2013, p.337). This could be understood, as there is no singular definition of anything, there is never any saying it all. There are only gaps between the elements of experience, that is there is always something missing. In the process of re-telling, a new version of understanding is created. All constructed knowledge is from a date in the past (Neill, 2013). As discourse unfolds, moments of clarity and reason occur but the desire for completeness is itself an impossible task (Leader & Groves, 2013). Analysing a definition of the mastery curriculum through the lens of psychoanalysis suggests that knowledge of the mastery curriculum is neither finite nor permanent and in turn, it would question the premise of 'can you actually master anything?'

We might imagine that what we read or hear carries a meaning or truth, and we imagine that this meaning is the same for each one of us involved. If we were to read the NCETM's 'Mastery approaches to mathematics and new national curriculum' (NCETM, 2014), would this have the same meaning for everyone? Does the reader interpret the writing in the same way that the author intended? When you implement the 'mastery curriculum', does it look as intended or does something get lost? How do pupils interpret it? To imagine that all these interpretations will lead to the same outcome is a lot to imagine. This is not say that there is no truth of language but there are layers of interpretation. The meaning of text always exists with the reader. The way the reader interprets text is always subjective, always embedded with extra layers of meanings from the position the subject occupies and the desires based on their situation. Brown et al. (2014) portray Lacanian psychoanalytical theory as 'a subject divided between what she is doing and what she says she is doing' (p.285).

Lacanian discourse analysis

Discourse analysis is an impossible task as, there are innumerable meanings (Neil, 2013) but by engaging with the discourses, we can start to unpick some truth, and make sense of what is going on. Using psychoanalysis is not going to provide a cure or fix but might give some insight into some of the difficult aspects of conceptualising a mastery curriculum: the fantasies and desires, the fears and anxieties, the irrational and the unconscious. Trying to discover the unconscious forces that interfere with conscious actions. Using Lacan's four discourses, I look at how student teachers begin

to construct understandings of multifaceted discursive encounters. Any discourse comprises the master (represents a position of power), the university (represents systems of knowledge), the hysteric (represents the subject who asks questions of the master) and the analyst (represents resistance to oppressive power structures). According to Bailly, ‘discourse’ “relates to the organisation of communication between an agent and an ‘other’ ” (2009, p.58). A link between the one who produces and the one who receives a message, set within a socially structured framework.

Lacan presents such a framework through which we can begin to understand aspects of any discursive encounter. The agent of the discourse could be the author, speaker, institution, a position of power or it could be described as an ideology. The agent addresses someone or something (‘an other’). Each agent or act is supported by a certain truth or belief. At the other end of the discourse is a product, that cannot be accounted for by the agent. Lacan’s framework of the four discourses considers each of the master, the university, the hysteric and the analyst as the agent, and how this addresses someone or something. The next section considers the discourse in more detail and in turn, analyses the data.

Discourse of the Master

Regulatory teaching standards and the national curriculum might be seen as an example of a Lacanian “master discourse”, an arbitrary assertion of a truth commensurate with the power relations in the discursive location. “Mastery” comprises a “master signifier” an empty notion (“point de capiton”) that orients the discourse it is filled with layers of imposed meaning. Particular values and ideals are presented as an absolute truth, which in Lacan’s formulation, can only occur if it is underpinned by subjective endorsement. That is, for the mastery curriculum to be represented by the master discourse it needs to be endorsed by the (student) teacher. Without the student teacher believing that, the mastery curriculum is an absolute truth then it cannot hold the position of agent. While belief remains in place the master discourse remains in position to control and construct ideology.

The mastery curriculum as a master discourse prescribes particular conceptions of mathematics that predicate particular pedagogical approaches. This was evident when I observed a student teacher using the Mathematics Mastery framework to teach a lesson on fractions. The slides were commercially pre-designed using a ‘concrete, pictorial and abstract’ approach and subsequently the lesson plan was written around this structure following the advice given by the class teacher.

‘Pupils will be refreshed on their new knowledge of reciprocals; I will work through an example with pupils. Once I am confident with their understanding, I will ask pupils to complete a calculation on their mini whiteboards. Pupils will then complete the question in their books to use as a sticking point for future reference.’

Reciprocals
The key concept!

3
 $3 \times 6 = 18$
 or
 $3 \div \frac{1}{6} = 18$

12
 $12 \div = 4$
 or
 $12 \times - = 4$

Discuss with your partner how to complete the sentences below.
Use the examples to explain how you decided to complete them.

Multiplying by any number is equivalent to ____ by its reciprocal.
Dividing by any number is equivalent to ____ by its reciprocal.

Figure1: Extract from a student teacher lesson plan (left) referring to a slide on reciprocals (right).

By participating in, identifying with, and reproducing the lesson, the student teacher is described as a ‘good’ teacher, who understands how to produce what the subject

mentor, as a proxy for the master, wants to hear, thereby reinforcing the master's authority. The prompt in the lesson plan, 'pupils will then complete the question in their books to use as a sticking point for future reference', made me consider whom this lesson plan is for. Is it for the student teacher or the subject mentor? The student teacher is trying to justify what he is doing as a product of the mastery curriculum and the regulatory teaching standards (master discourse) provides the commensurate framework in a self-fulfilling union.

Discourse of the university

In the discourse of the university, 'knowledge' occupies the place as the agent (Bailly, 2009). Knowledge acts as the ultimate object of desire. It is closely related to the master discourse; setting in motion the truth or understanding of the master discourse. It replaces the authoritarian discourse of the master with rationalisation. That is, it comprises a disguised master using rationality to defend a position rather than mere whim. This in itself makes the university discourse powerful, as the appearance of objective, neutral knowledge is underpinned by the 'truth' of the master discourse. In the mastery curriculum, the university discourse could emerge under the condition of student teachers serving knowledge, a process that they see as empowering the pupils (Bracher, 2006). For example, in an observed lesson a student teacher was teaching 'multiplying and dividing by unit fractions'. The idea of multiplying and dividing by unit fractions is underpinned by the concept of the reciprocal. The following is a transcript from the lesson:

Pupil: When you multiply by a fraction, you divide by the denominator

Student Teacher: How could you re-word this using the word reciprocal?

Pupils Could it be times or multiply?

It looks like the pupil is trying to guess what the teacher wants her to say. The pupil is not confident in the use of the word reciprocal and hence suggests times or multiply. The student teacher believes that using the concept of reciprocals to multiply and divide fractions will empower the student over any other method. He has bought into the knowledge sold by the mastery curriculum. Pupils are assessed as those that are 'educated' or 'uneducated' based on competence in the discourse as revealed by the ability to reproduce their knowledge of reciprocals as prescribed by the student teacher, a proxy for the knowledge of the master curriculum (Thomas 2014). Blair (2015) warns of the pitfalls of this convergent approach of teaching, if the pupils wish to pursue a different line of approach then this is not permitted. This level of prescription of a concept can deny pupils any agency.

Discourse of the Hysteric

The Hysteric represents the subject in the position of agent who disrupts the authority of the master discourse. The subject (student teacher) may successfully act according to the master discourse but there is a 'gap between performance and awareness of that performance' (Brown, Rowley & Smith, 2014 p.287). The student teacher driven by uncertainty tries to reduce the gap between the ideology and reality. The student teacher in addressing the master discourse, no longer accepts the master curriculum as an absolute truth. Why are we teaching it this way? Can it be done otherwise? Despite these questions, they remain in solidarity with the master discourse. The product of

the hysteric is the acquisition of new knowledge (Bailly, 2009). One student teacher described some of the challenges presented by the mastery curriculum.

Very encouraged by the concept of mastery, challenges are going to arise, with differentiation bringing up the less able but also embed a culture of mastery with the more able, whether you can get everyone to the same stage, I don't know.

The student teacher is troubled by the demand to ensure most pupils progress through the curriculum content at the same pace, whilst still being able to offer support and opportunities to deepen knowledge. He is challenging the master discourse (mastery curriculum), asking what it expects of him. How is it possible to do this? The student teacher has been prompted by the gap between being completely compliant and with the demand being made (Brown et al., 2014).

Discourse of the analyst

The analyst's discourse interferes with the master discourse; the subject recognises that his or her own discourse is not fully within his or her control but involves a process of identifying the master discourses, thinking about it repeatedly and hence lessening its intensity by gaining insight about its workings (Bailly, 2009). The agent of the discourse is referred to as *objet petit*. In simple terms, *objet petit* is the object cause of desire, the urge to close the gap between fantasy and the reality; underpinned by the truth of his or her unconscious knowledge. In this way, it disrupts authoritarian discourse, which demand compliance to explicit operational or administrative conventions by listening for the underlying truth of a message rather than its overt content (Thomas, 2014). The aim of the subject (student teacher) is not to adopt any particular set of identity elements but to become aware of how to develop his identity and how others identify him. This type of discourse encourages student teachers to question the authoritarian aspects of discursive structures, for example the mastery curriculum. In a group interview, one of the student teachers discussed some of the issues of mastery.

I think the issue with it is that it is just subjective, you know, eventually like, everyone has these great ideas now but in time, it's just going to deteriorate. (Group laughing). I mean the term mastery is just like there is absolutely no way that anyone can be a master in proportional reasoning, when you consider what the word mastery means.

The word 'master' is in conflict with alternative systems of knowledge. There is a gap between his definition of mastery and the mastery curriculum. The student teacher is troubled that anyone can have achieved mastery in proportional reasoning. He sees the mastery curriculum as incomplete, in seeking to understand, he produces new knowledge (Neill, 2013).

Conclusion

My writing is not intended to be critical of the mastery curriculum but by using Lacanian discourse theory, it exposes it as an ambivalent construct. 'There is no universe of discourse', which suggests that knowledge of the mastery curriculum is neither finite nor permanent. Using Lacan's four discourses, I locate the master discourse (mastery curriculum) dynamically in relation to the other factors of the discourse played out. Student teachers' conceptualisation of the mastery curriculum shifts throughout, as they variously are regulated, educated, resist or are resisted. In repeatedly mapping out aspects of the mastery curriculum to the elements of the

discourse, in considering the fantasies and desires, the fears and anxieties, the irrational and the unconscious, competing possible understandings are generated and our perspectives expand. In the fractions lesson observed, developing a conceptual understanding of the reciprocal could be seen as regulatory, following a prescribed approach without question. I could, however, revisit this and see it in a different way. The student teacher believes that multiplying by the reciprocal to divide fractions is more empowering than any other method. The point is not to identify a singular truth of meaning. The point is to disrupt initial thinking and consider alternative meanings.

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