Reconsidering teacher professional learning: A practice-based, sociomaterial approach

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Drawing on sociomaterial perspectives on learning (Fenwick, 2010; Sorensen, 2009) and empirical data collected as part of a national study of teacher professional learning and professional teaching standards, in this paper I address two key questions, namely: (i) how is teacher learning best understood? and (ii) how might a practice-based perspective in which the sociality and the materiality of learning are taken into account contribute to existing understandings of this learning? Initially, the paper deploys the three conceptions of teacher learning provided by Cochran-Smith and Lytle (1999) as an interpretive frame. Set within the context of the learning of school geography teachers, subsequently, two broad patterns of teacher learning are identified, namely, learning as representing and learning as enacting. Findings from the data analyses reflect the contemporary view of teacher professional learning which is framed in terms of active participation in the practices of a social group (see for example, McArule & Coutts, 2010) and demonstrate the idea that this learning is discursively and materially produced. Altogether, it is argued that teacher professional learning can usefully be conceptualised as a performative knowledge practice constituted and enacted by people and tools. This conceptualisation affords attention to what professional learning is and what it does – its knowledge, power and identity effects. In so doing, it challenges the currently established individualised, psychological perspective where learning is primarily seen in terms of the intrinsic capabilities or potentialities of people and, by extension, the emphasis on individual responsibility that underscores the governance regime of neoliberalism.

Keywords: teacher professional learning, professional teaching standards, sociomaterial approach

Introduction

New socioeconomic conditions have resulted in significant reconfiguration of professional learning and professional education. Neoliberal and neoconservative political agendas underwrite the current socio-political context for education, and more specifically, teacher professional learning (Groundwater-Smith & Mockler, 2009). Increased demands created by more economistic and managerial pressures characterise the current educational environment in a number of countries, including Australia. ‘Education in Australia over the past decade has been dominated by concerns associated with issues of quality and, in particular, ways in which quality learning outcomes can be produced, measured and assured’ (White, Bloomfield, & Le Cornu, 2010, p.181). Styling education reform along the lines of these concerns serves to strengthen discourses of the centrality of the teacher (Larsen, 2010) and enlarge the idea that the key to educational success lies with the teacher. Challenging the established individualised, psychological perspective, where learning is primarily seen in terms of the intrinsic capabilities or potentialities of people, and crossing boundaries between the human and the non-human world, the argument made in this paper is that it’s practices that produce learning and that materiality plays a constitutive role in this production. Taking my lead from actor-network theory’s (Latour, 2005; Law, 2008, 2009a) concern with the primacy of practice and the agency of objects, I provide a practice-based view of teacher professional learning in which both people and materials participate and through this participation create effects (eg. epistemic, social, political). This practice-based approach, it is claimed, affords a way of thinking about teacher professional learning which does not reduce this learning to mechanistic and instrumentalist criteria and categories.
The paper proceeds in three substantive sections. In section two, I draw on the existing literature to sketch some modes of understanding teacher professional learning as a field of study. I follow this sketch with a summary of the central tenets of actor-network theory (ANT) as an intellectual tradition that affords fresh understandings of how this learning can be framed. Next, in section three, a national empirical study tracing the relationship between the development of professional standards for teaching geography in Australian schools and teacher professional learning is outlined and details describing the empirical methods used to collect data for the study are given. Two exemplars of practices of teacher knowing and learning enacted in the key empirical contexts in which the study was set (school classrooms, teacher panel meetings), and the patterns that form in these practices, are presented. In section four, the implications of these enactments for rethinking teacher professional learning are drawn out and the distinctiveness of the contribution of actor-network theory to studies of teacher professional learning is discussed. The potential of the sociomaterial perspective it provides for addressing issues attached to the changing demands on teacher professional learning and knowledge in the contemporary conditions of education is considered.

**What counts as professional learning? Established discourses and other stories**

In an important paper published over a decade ago, Cochran-Smith and Lytle (1999, p.250) distinguished between three prominent conceptions of teacher learning, namely ‘knowledge-for-practice’ which refers to formal knowledge and theory that teachers acquire from experts outside the classroom for use in the classroom, in order to improve practice; ‘knowledge-in-practice’ which assumes that the knowledge teachers need to teach well is practical knowledge embedded in the work of expert teachers and teachers’ reflections on practice; and ‘knowledge-of-practice’ which relies on the idea that the knowledge teachers require is generated through teachers engaging in systematic inquiry about practice and the knowledge and theory produced by others. Contextualising these conceptions of teacher learning with respect to professional education, I tell three short stories of this learning. Across the telling, the unit of analysis shifts to include the human and the non human at once, a shift that can be called ‘seeing double’ (Pickering, 2005).

**Tale 1 – Learning as growth in representational knowledge**

Learning can be defined minimally as ‘growth in knowledge’ (Sorensen, 2009) and by extension, learning professionally as growth in the knowledge and skills required in order to practise professionally and formative notions of identity (Mulcahy, 2011). According to cognitive approaches to professional learning, this growth is located in the individual professional, or prospective professional. Knowledge has a definite form that is substantially independent of and prior to the mental ability used by this professional to acquire it. ‘Knowledge is understood as mental, and practice is irrelevant for knowledge achievement’ (Sorensen, 2009, pp.177-178). This ‘knowledge-for’ model of professional learning comes out of a representationalist epistemology since the knowledge to be acquired is taken to be separate from practice and stable — more or less preformed and pregiven to practitioners for use in practice. In educational discourse and public discourses more generally, this knowledge is called theory (Edwards, 2011). It can assume the form of: professional teaching standards — elements of knowledge and practice deemed essential in the preparation of members of the teaching profession; or evidence from research about effective practice that schools are increasingly required to attend to (Cordingley, 2008, p.41); or programs of professional development which are developed independently of participating teachers’ practice (Timperley, 2008, p.10). In such programs, professional learning is taken to involve ‘the acquisition of something, such as a particular skill, fact, competency, or capacity or its internalisation (something external is brought within the individual)’ (Lattuca, 2002, p.718). The
model of professional education sketched above presumes that much of the knowledge and learning work is done individually leaving little room for the idea that teacher professionals engage in a world of social practices, their activities being very often part of larger ‘communities of practice’ (Lave & Wenger, 1991; Wenger, 1998). Accenting as it does the ‘what’ of professional preparation, this model does not afford a deep description of ‘the specificities of the how of participation’ in teacher professional learning (Sorensen, 2009, p.177, original emphasis).

Tale 2 – Learning as participating in the practices of a social group

My second tale engages directly with the idea of the mutual constitution of learning, identity and context and defines learning as increasingly skilled participation in the practices of a social group. Teacher learning involves the construction of new knowledge through the interaction of what teachers already know and believe and the ideas, events, and activities with which they come in contact. ‘It is the interactive co-construction of knowledge between teachers reflecting on their own practice, in relation to existing knowledge/research, which is considered most valuable’ (Hardy, 2010, p.716). Going beyond traditional psychological perspectives of mind, this sociocultural approach to learning takes processes of thinking and learning to be mediated and distributed – ‘not contained within individual minds, but rather distributed across persons, tools, and learning environments’ (Leander, Phillips, & Taylor, 2010, p.330). It represents the contemporary view of teacher professional learning which, in the educational literature, is framed in terms of: practitioner inquiry and teacher research; shared sense-making and collaborative engagement; mentoring as a process for engaging in professional learning; and inquiry communities and professional learning communities (see for example, Berry, Clemans, & Kostogriz, 2006; Campbell & Groundwater-Smith, 2010; Cochran-Smith & Lytle, 1999; Darling-Hammond & Richardson, 2009; DuFour & Eaker, 1998; Levine, 2010; McArde & Coutts, 2010; Scott, Clarkson, & McDonough, 2011; Stoll & Seashore, 2007; Tarc & Smaller, 2009; Timperley, 2008).

The notion of learning as skilled participation in the practices of a social group assumes that learning is an outcome of social interaction and that the practice of participation is an exclusively human one. In line with tale one above, a representationalist view of the world informs this account of (teacher) learning. While learning is mediated by material tools and learning environments, and material tools are constitutive parts of learning, the assumption is made that meaning and matter are separate. ‘Mediational means … are developed and used by individuals and groups for different purposes. … We appropriate them so that we may participate in the particular practices of our culture’ (Lattuca, 2002, p.715). Altogether, knowledge and learning are confined to a social world. Sociality is an important level of analysis in education, but so too, according to an increasing body of educational research (Carmichael, 2011; Fenwick & Edwards, 2010; Nespor, 1994; Perillo & Mulcahy, 2010; Sorensen, 2009), is materiality. Learning need not be predefined as realised by humans in social interaction; rather, it is a ‘result of a symmetric interplay of humans and materials’ (Sorensen, 2009, p.5).

Tale 3 – Learning as assemblages of knowledge practice

Complexifying the account of teacher learning made to this point, in this, the final tale, learning is conceived as a matter of seeing double.

‘One does not have to fix one’s gaze on a material world from which all traces of humanity have been expunged; or on its residue – a social world from which the material world has been magically whisked away’.  

1 ‘Variously defined as situated cognition, situated learning, situativity, or sociocultural theories’, the sociocultural approach to learning highlights its social and contextualised nature. It rest on the claim that learning ‘cannot be understood apart from its historical, cultural, and institutional contexts’ (Lattuca, 2002, p.713).
by linguistic conjuring tricks. The world itself does not impose this division upon us. One can, if one wants, try shifting the unit of analysis. Though none of the traditional disciplines does this, one can try seeing double: seeing the human and the nonhuman at once, without trying to strip either away’ (Pickering, 2005, p.31, original emphasis).

It is an ontologically diverse set of knowledge practices and depends for its success on the development, and maintenance, of configurations of practice. In a sociomaterial account of learning, we are impelled to give attention, at one and the same time, to its socialities and materialities. Here, materiality is not a simple materiality in which there is a priori ‘stuff’. Like sociality, it is ‘the achieved ability to connect to other entities’ (Sorensen, 2009, p.177, my emphasis). And, the ‘materiality of learning concerns how learning connects to other entities’ (ibid., my emphasis). Sorensen continues: In order to characterize the materiality of learning, we must describe in detail which entities enter into which relations that form which patterns in order to be able to characterize precisely the ability of a form of learning to connect to other entities (p.181). Seeing double is a matter of taking associations or connections or relations into account. Rather than discrete and singular categories, knowledge and learning demonstrate the characteristics of an assemblage – which, as Law (Law, 2004, p.42) has it, ‘is a process of bundling, of assembling, … in which the elements put together are not fixed in shape, do not belong to a larger pre-given list but are constructed at least in part as they are entangled together’ (Law, 2004, p.42). ‘A[assemblages are composed of heterogeneous elements that may be human and non-human, organic and inorganic, technical and natural’ (Anderson & McFarlane, 2011, p.124).

**Actor-network theory and material semiotics: An assemblage analytic**

Using insights from science and technology studies, post-structuralism and material semiotics, actor-network theory is widely known for its ‘commitment to practice and the stuff of the world’ (Law, 2008, p.643). As Law recounts, it is ‘a disparate family of material-semiotic tools, sensibilities and methods of analysis’ that can be used to tell ‘stories about “how” relations assemble or don’t’ (Law, 2009a, p.141). The assumption is made that nothing has reality, or form, outside its ‘doing’ in an actor-network: ‘assemblage, arrangement, configuration or lay-out’ (Hardie & MacKenzie, 2007, p.58). Law (2009b, p.1, original emphasis) continues:

> If we think performatively, then reality is not assumed to be independent, prior, definite, singular or coherent. Rather the logic is turned upside down. If reality *appears* (as it usually does) to be independent, prior, definite, singular or coherent then this is because it is being *done* that way. … Practices enact realities … This means that if we want to understand how realities are done or to explore their politics, then we have to attend carefully to practices and ask how they work.

In an assemblage analytic, questions of knowing and learning are entangled in questions of becoming. Indeed, knowing and learning *are* becoming, appearing in the real-time of embodied practice (Pickering, 2008, p.2). A less fixed view of knowledge opens up.

Actor-network theory is acknowledged to provide a poststructuralist sense of assemblage whereby reality itself is assemblage (Verran, 2009, p.171). After the work of Verran, I argue that this sense of reality as assemblage is crucial for responsible educational research on teacher learning and, by extension, teacher quality. ‘Adopting such a framing involves dealing with and telling

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2 Accordingly, storying the materiality of learning is not a simple matter of ‘add material objects (to the account) and stir’.
3 The notion of becoming can be contrasted with the idea of being (identity, sameness). The recently released National Professional Standards for Teachers (Australian Institute for Teaching and School Leadership, 2011) provide various fixed points and processes that, I propose, have more to do with teacher *being* – a state reached – than teacher becoming. Organised into four professional career stages, graduate, proficient, highly accomplished and lead, and with regard to teacher knowledge and learning, these standards imply more fixity than flow eg, a graduate teacher by definition is not a highly accomplished teacher.
4 This of course includes the reality of the present paper. Its contents are assembled, arranged, contrived. This is not to say that untruths are told. Every piece of research and its research ‘report’ is an assemblage in which the researcher and the researched are caught up (Law, 2004).
stories of real worlds where objects and subjects materialise (or bundle) in particular ways’ (ibid.). The widely circulating discourse of teacher quality as ‘the single most important in-school factor influencing student achievement’ (Organisation for Economic Co-operation and Development, 2005) assigns primary responsibility for student achievement to persons and a specific instantiation of person (teacher). While this empirical claim is not necessarily untrue, it creates particular effects. Attention is taken from other agential entities such as public policy and school resourcing. Methodologically and morally too, in my view, the analytic lens needs to be widened.

The project in question: Data and methods matters

In what follows, I present two exemplars of practices of teacher knowing and learning towards showing how teacher learning gets done (is materialised). Set within the context of a national research study, I juxtapose two broad patterns of teacher learning enacted in the key empirical contexts of the study, teacher panel meetings and school classrooms. Funded under the Australian Research Council Linkage Grant scheme, the study was concerned to trace the relationship between the development of professional standards for teaching geography in Australian schools and teacher professional learning.¹ The first empirical phase of the project entailed studying what accomplished geography teaching is by documenting what geography teachers, who are deemed accomplished, do. Data were sourced from teachers and students via video recordings of accomplished teaching with identification of accomplished teachers being made by way of purposeful sampling. Thus, members of the Australian Geography Teachers’ Association were invited to nominate teachers who are widely regarded professionally, using various criteria including reputation for accomplishment within the disciplinary field, years of experience teaching school geography, teaching qualifications, etc. The approach adopted used technically complex methods² for video recording classrooms and supplementing the video records with post-lesson video-stimulated interviews with students and the teacher. Eleven case studies (22 lessons altogether) were conducted in eight schools (government and non-government; metropolitan and non-metropolitan) in three major Australian states. Video recordings were made over the course of a sequence of two lessons, each lasting for approximately fifty minutes.

The second empirical phase of the project sought to study the process of developing a set of standards for the accomplished teaching of school geography and the teacher learning of the teachers who took part in this development. This phase involved the conduct of teacher panel meetings (focus groups) in five Australian states. Meeting twice over six months, panels of practising geography teachers (64 teachers altogether) reviewed video excerpts from the video recordings made in the first phase of the project and a sub-sample of these teachers (41 altogether) responded individually to a series of semi-structured interview questions designed to elicit their experience of standards development work and any professional learning that formed part of this work. Working from a research project spanning different contexts or locales, and giving attention to socialities and materialities, I present different enactments of teacher knowing and learning and attend to their performative effects. Thus, I describe not only what professional learning is but also what it does – the knowledge (and power) effects it creates. Place locations and names of teachers have been altered for reasons of confidentiality.

¹ Spanning 2007-2010, this project was led by the author of this paper in association with Jeana Kriewaldt and David Clarke. The project’s Partner Investigators were the Australian Geography Teachers’ Association, the Geography Teachers’ Association of Victoria and the Victorian teacher registration authority, the Victorian Institute of Teaching.
² For each of eleven classrooms in eight schools and three major Australian states, two lessons, each lasting around 50 minutes, were videotaped using three cameras. One camera focused on the teacher, a second on individual students as part of a working group, and a third on the whole class as seen from the front of the room. Using as catalyst the video record from the whole class camera, with the teacher camera image inserted as a picture-in-picture image in one corner of the display, teachers were invited to make a reconstructive account of the lesson events deemed critical to student learning. Similarly, students were invited to make an account of lesson events, using as stimulus the video record from the teacher camera, with the individual students’ camera image inserted as a picture-in-picture image in one corner of the display.
Assembling teacher knowing and learning: Socialities and materialities

*Enactment 1 – Learning as representing: 'It's been very reinforcing'*

In this exemplar, learning resides within teachers as a collective group reflecting the contemporary view of teacher professional learning which is framed in terms of participation in the practices of a social group (see in particular McArdle & Coutts, 2010) towards gaining or extending knowledge of professional practice. Teacher learning in the context of geography teachers getting together in a small group to explore the dynamics of accomplished geography teaching, and subsequently develop a set of standards for this teaching, is a matter of assembling knowledge through sharing experiences, ideas and feelings about accomplished teaching and reflecting on these. Here, teacher learning is about accomplished practice. A small number of responses to the interview question, ‘What learning took place as a result of working with colleagues’ at the panel meetings? Can you identify three things that you learned?’ has been selected to give a sense of the participating teachers’ views:

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<th>It’s been great just to reflect on all the various aspects of what it is to be an accomplished teacher; often you just don’t sit down and think about it, as I was saying before, so that’s been good. Whether I have gone away and actually changed anything as a result of these meetings, I may have done it subconsciously, but I haven’t gone away thinking I must do that now because of what I remembered, that hasn’t happened. But it may have happened on a different level; I may have been more aware of doing things better because of what I have been doing here.</th>
<th>Commonality of understanding of Geography and Geography teaching I think is really important; it’s been very reinforcing. The breadth of experience of other teachers, just listening to their ideas and the way that they’ve approached things, I think is also really important and that’s why networks are also absolutely vital. And the importance of professional development in creating a better teacher. I think those would be the three things particularly.</th>
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<td>Firstly it’s great just to be working with other Geographers, the passion they actually have. … It’s great just to listen, because a lot of the time you’re thinking ‘I do this, I do that, but how can I get that to work?’ and it’s those little things that really help, and I suppose it’s more the enthusiasm to keep on going for it as well.</td>
<td>I always enjoy talking about what we’re doing with different people. Again with that reflection, I guess being with people who are at all different stages of their career as well was really good and learning how to use a meta language a little bit more.</td>
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<td>Nearly all Geographers get on together, there’s something about Geographers, that we have this perspective, although there is not many degrees of separation between us which is a starting point, but we are all kind of interested in the world and interested in travel and interested in other people and what’s going on, so even though we may not be the world’s best friends, there is always plenty to talk about and plenty of common ground and I kind of like that about Geographers.</td>
<td>I think it really reinforced the collaborative and collegiate nature of this subject when you get a group of passionate Geography teachers, you get a group of people that want to keep learning and that want to share their ideas, and so for me personally, I just enjoy bouncing ideas off other Geography teachers and hearing what particularly young Geography teachers are doing, seeing their ideas and hearing about it. That’s something that you could never get sick of doing I think as a teacher.</td>
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<td>It was really good to see the two colleagues that produced the sample work from their classrooms.</td>
<td>You always learn that other ways and approaches of doing things just get mentioned almost incidentally.</td>
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<td>I think viewing the video clip and X’s lesson, that provided a lot of opportunities for me to think about what I do in the classroom, and the discussion that occurred after, even more so, in terms of my reflecting on learning, and the fact that, at the end, he was reflecting on his teaching, on his lesson, what the kids learnt, or didn’t learn. Because I would say that’s a critical element of teaching; if one doesn’t reflect, one doesn’t learn.</td>
<td>The most useful thing for me was to meet with some other key Geographic professionals that think about the sorts of issues that we’re all dealing with in our teaching everyday, and trying to grapple with what Geography is and what makes a good Geographer, and that’s been great.</td>
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<td></td>
<td>There was an affirmation I think in terms of what we do, you know, accomplished teaching in geography, anyway.</td>
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7 It might be noted that this question presupposes a particular view of teacher professional learning, that is, that this learning is a collegial process. The data described could be said to be an artefact of the questions used to elicit information. In much of postmodern methodological literature, it is taken that one’s research methods participate in the knowledge produced through the research process (see for example, Buscher, Urry, & Witchger, 2011). Responsibility in research involves showing awareness of the part that methods play in knowledge production; acknowledging their performative effects.
Whether an imagined or actual community, it is clear from the comments that knowledge is made communally – ‘it’s great just to be working with other Geographers’. The metaphor of network – ‘that’s why networks are also absolutely vital’ – points to knowing as socially constructed. A strong sense of belonging to a professional community is provided in tandem with the identity work that this belonging achieves: ‘There was an affirmation I think in terms of what we do, you know, accomplished teaching in geography’.

By all accounts, teacher learning is a matter of immersion in and engagement with the Geographic community through manifestly human processes of meaning-making – reflection, thinking, talking and listening: ‘I just enjoy bouncing ideas off other Geography teachers’. It involves the construction of new understandings, or the extension of existing understandings, through the interaction of what is already known and believed about accomplished geography teaching with the ideas, events, and activities proffered at the panel meetings. As signalled in my second story of teacher learning above, ‘it is the interactive co-construction of knowledge between teachers reflecting on their own practice, in relation to existing knowledge/research’, which is most salient (Hardy, 2010, p.716). Thus, we ‘witness’ geography teachers ‘trying to grapple with what Geography is and what makes a good Geographer’ and being affirmed in terms of what they do regarding ‘accomplished teaching in geography’.

‘Socialities’ are prominent: ‘there is always plenty to talk about and plenty of common ground’, and while ‘materialities’ are present – ‘we are all kind of interested in the world and interested in travel’; ‘It was really good to see the two colleagues that produced the sample work from their classrooms’ – they appear neither to constitute teacher learning nor contribute significantly to teacher knowledge. They are ‘things-behind-phenomena’ (Barad, 2007, p.205). As Edwards (2011, p.4) comments, this position is not new in education. ‘(E)ducation is assumed to enact primarily learning as representation, representing objects to subjects’. Thus, accomplished teaching practice, the object under inquiry in the teacher panel meetings and the project at large, is represented to teachers by way of video clips, and subsequently, teacher talk and teacher reflection. In an actor-network framing, these knowledge representations play an intermediary role; they ‘simply’ subserve human processing: ‘I think viewing the video clip and X’s lesson, that provided a lot of opportunities for me to think about what I do in the classroom, and the discussion that occurred after, even more so, in terms of my reflecting on learning’.

Barad (2007, p.53) argues that ‘representationalism marks a failure to take account of the practices through which representations (and, I add, representational knowledge) are produced’. Like this paper, this knowledge is literally and materially ‘made up’. It is a material practice, made co-constitutively of matter (video technology, face-to-face teacher meetings, sample work) and meaning (teacher talk, discourses of professional learning eg. reflective practice, video texts), but not acknowledged as such. In a representational mode of learning, ‘fissures, contradictions and the work involved’ in learning tend to be hidden (Mol, 2010, p.259). In an enacting mode of learning (see below), these come more readily to view, affording a more distributed sense of learning agents and agencies.

**Enactment 2 – Learning as enacting: ‘I just thought this morning, I’ve got to talk about this’**

My second exemplar concerns a classroom setting within a non-government school in which a Year 8 geography class is being introduced by its teacher, Simone, to river processes. Here, teacher learning assumes the form of enacting (performing) and incorporates an improvisatory quality which, after Sorensen (2009), I will call liquid knowledge. The trope ‘learning as enacting’ contrasts strongly with the expression ‘learning as representing’ and is used to refer to processes of professional knowing and learning that are occasioned and indeterminate. Teacher learning
presents, without prior notice, in practice. Introducing the lesson thus: ‘We’re going to start looking at river landforms and the way rivers work in erosion, deposition and transportation’, Simone’s stated intention for it is to build knowledge about the workings of rivers in preparation for a forthcoming field trip to a river. Five or so minutes into the lesson, Simone stops and says: ‘Before I start though … something pretty big has happened and I couldn’t … not talk about it today’. Showing a digital image of Burma, she proceeds to hold an extended class discussion about the impact of a tropical cyclone, Cyclone Nargis, which, as reported worldwide earlier in the day, has devastated southwestern Burma. Referring to this discussion as ‘my little quick introduction’, she concludes it thus:

I just couldn’t come today and not talk about this … it’s a big deal. Sixty thousand people, that’s a bit of a big deal and Australia is currently tossing up (as to) how much support we should provide. … That was just my little quick introduction; ’cos we couldn’t live without that.

Affected by the scale of the event and the fact that it has occurred in a poor country – ‘You live in Burma … you’re a farmer and you don’t have much money’ – Simone’s (seemingly psychological) desire to talk about it means taking a departure from her ‘teaching text’. Or, in Deleuze and Guattari’s (1988) terms, taking a line of flight – an unpredictable direction. In so doing, I posit, she is learning professionally. At the post-lesson interview, Simone comments:

The first thing I decided to do this morning was to talk about the cyclone. I added that to the (lesson); that to me was important. Because one of the things I have been talking to them about is current events in geography. So, I thought I have to talk about this. … Talking about the cyclone, that was unexpected for me. I, I, that was just something, I just thought this morning, I’ve got to talk about this because I get excited. That was for me, a lot of them had not put that all together before. And, you can tell with that class when most of them are listening because they lean forward. There’s a few boys in there specially who used to lean right forward and that sort of thing and get involved.

In unexpectedly talking about the cyclone, I claim, Simone comes to be somewhat different professionally, through ‘doing’ differently, with respect to pedagogy and curriculum. Learning to teach differently is a matter of multiple and contradictory sociomaterial practices – teacher decision ‘to talk about the cyclone’, unexpected talking about the cyclone, the planned conduct of a geography lesson, the unplanned teaching into a geographic event, other geographic events, digital technology, teacher excitement, listening students, bodies leaning forward and getting involved and so on.

While styling the decision to talk about the cyclone as a matter of rational curricular choice – ‘I added that … because one of the things I have been talking to them about is current events in geography’ – something other than the individualised subject-of-will that accomplishes a sense of itself as coherent, knowable, continuous, and predictable (Davies, 2010, p.57) – appears to be in play. The felt intensity and hesitancy of: ‘I’ve got to talk about this’, and, ’cos we couldn’t live without that’, and, ‘I, I, that was just something, I just thought this morning, I’ve got to talk about this because I get excited. That was for me, a lot of them had not put that all together before. And, you can tell with that class when most of them are listening because they lean forward. There’s a few boys in there specially who used to lean right forward and that sort of thing and get involved.

In conjunction with the technology that is brought to bear – ‘if I couldn’t have my data projector, if you teach rivers, … without having those allied images or anything like that to be able to show, I wouldn’t be able to do as well as I can’ – Simone is caught up, albeit momentarily, in different ways of knowing and learning professionally. Formally, these ways can be called non-representational (Thrift, 2008) or more than representational (Lorimer, 2005); what matters most in the ‘more than’ is ‘multifarious, open encounters in the realm of practice’:
The focus falls on how life takes shape and gains expression in shared experiences, everyday routines, fleeting encounters, embodied movements, precognitive triggers, practical skills, affective intensities, enduring urges, unexceptional interactions and sensuous dispositions’ (p.84).

As one of Simone’s students reports at interview: ‘(The things that helped my learning were) things like the casual talks, like about things, not just the topic that we are learning, things that happen on the actual news and the happenings around the world’. Departing from the topic, performing curriculum as discontinuous, opens up the possibility of becoming other than the schooled teacher, and other than the ‘professionalised learner’ who can identify characteristics of accomplished teaching practice: ‘grapple with what Geography is and what makes a good Geographer’. Simone’s learning is less about practice; it’s more as/in/for practice.

Reconsidering teacher professional learning: The salience of sociomaterial practice

Productive teacher professional learning occurs in ‘the thick of things’ (Pickering, 2008) – ‘the intersection of the human and the nonhuman’ (ibid., p.3). The argument is made that teacher professional learning can, with profit, be conceptualised as a performative knowledge practice constituted and enacted by people and tools in complex ecologies or collectives. ‘The contours of the material world endlessly emerge and become; likewise the contours of humanity’ (Pickering, 2008, p.4). This learning differs between sites: it assumes different forms and creates different knowledge and identity effects in different locations. The teacher panel meetings of tale one whereby participants in a research project meet to discuss the characteristics of accomplished geography teaching and the learning that flows from this discussion bring a distantiated reality of teacher learning into being. This learning is learning about teaching. A somewhat fixed, generalised and detached world of professional knowledge follows – knowledge of ‘all the various aspects of what it is to be an accomplished teacher’. Teacher learners emerge as reflective practitioners, albeit engaged collaboratively in learning. In the classroom setting of tale two whereby a practising teacher is imputed to be enacting teaching and teacher learning, this learning presents as fluid, affecting and involved: ‘(I)t’s a big deal. Sixty thousand people’. An enacting mode of learning attunes to the complex particularities of practice in its specific circumstances: ‘I just couldn’t come today and not talk about this’.

Understanding how materials are involved in enacting different forms of learning ‘teaches us how changes in learning material can have wide-reaching consequences. A learning material contributes to performing a certain space, which gives rise to a certain form of knowledge, a certain form of learning’ (Sorensen, 2009, p.136). In the contemporary literature on teacher professional learning, practitioner inquiry, collaborative engagement and professional learning communities tend to be privileged. In empirical practice, the character of this learning is practical, distributed and variable, presenting as knowledge about teaching (representational knowledge) and knowledge as/in/for teaching (liquid knowledge). What teacher professional learning is depends on how participants in it (persons, texts, technologies, bodies) performatively accomplish it as a practice. Altogether, teacher professional learning is irreducible to singularity. The crucial theoretical point implied here is that we need all versions of teacher learning and that policy around this practice could reflect this ‘versioning’ – not mandate any one version.

Importantly, practices ‘have built-in normativities, contributing to ‘some worlds-in-progress but not to others’ (Moser, 2008, p.99). The question becomes which worlds of professional learning we want practices to make. As the currently established view of teacher professional learning has it, individuals are centre stage with respect to this learning, through processes of individual or collective reflection on and inquiry into ‘lived’ practice. Making a socio-material account of this learning ‘gives a new perspective on what goes on in practice, and holds possibilities for new ways of organising this practice’ (Svabo, 2008, p.171). Attending to materiality can be subversive
of neo-liberal assumptions that place exclusive value on utility and the individualised teacher subject-of-will (Davies, 2010). Arguably, teacher subjects such as Simone who exhibits an openness to the unexpected and unwilled (contingent) are well placed to probe these assumptions. Conceiving teacher learning as assemblage – the continuous work of pulling disparate materials together – brings into view practices that can challenge utilitarianism and technicism and the materials through which they are mobilised and maintained (eg. representations, standards, metrics, measures, categories). The affective intensities and bodily knowledge displayed with respect to cyclone Nargis go some way towards this. They have the potential to materialise alternative realities of teacher learning. Studying teacher learning and teacher knowledge in its material specificity lifts up to view the myriad ways in which these practices manifest themselves, serving to challenge the currently established use of inscriptions (representation, standards, data, evidence) for interpreting teaching and calculating its outcomes. In other words, it lends itself to playing material/practical politics.

References

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