Mobilising New Understandings: An Actor-Network Analysis of Learning and Change in a Self-Directed Professional Development Community

Abstract

This study joins recent research that explores the phenomenon of teacher learning through complexity and variability (e.g., Opfer & Pedder, 2011; Keay et al., 2019). Our paper furthers this line of enquiry by exploring how literacy teacher learning unfolds in self-directed professional development. In particular, we use concepts from actor-network theory (ANT) to help understand the ways two iterations of a teacher book club influenced participants' learning. The first iteration supported one teacher, Sebastián, in changing from traditional, teacher-centered literature study to more student-driven reading and writing workshop instruction and in taking up critical, asset-based perspectives of students. A second iteration of this group did *not* support a different, new teacher, Claire, in reframing her practice or perspective in similar ways. While we, as both active participants within the teacher book clubs and researchers interested in teacher learning, were initially confused and disappointed with what appeared to be a failed learning experience for Claire, engaging ANT offered a new angle. Rather than focusing on Claire as an individual, ANT allowed us to trace backwards to see how networks came together, competed, dissolved, overlapped in ways that produced Claire's teaching practices and perspectives, unsettling individualised and linear conceptions of teacher learning.

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Although the field tends to conceptualise teacher learning as top-down training in teacher education programmes followed by school-sanctioned professional development (e.g., Kyndt et al., 2016; Lieberman & Mace, 2008), teacher learning takes many forms and comes from many sources. For contemporary teachers, the ways knowledges travel are increasingly complex (Boylan, 2010; Boylan et al., 2018; Opfer & Pedder, 2011) and not adequately represented by depictions of tidy, vertically-aligned apprenticeships of novices training under fully-formed experts (Lave & Wenger, 1991). We align this study with non-linear models of understanding how learning occurs, thus acknowledging teacher learning as 'more transformative, participative...and long term' (Keay et al., 2019, p. 127) than the ways traditional transmissive models present this phenomenon.

In rejection of linear, individualistic, transactional depictions of teaching and learning, several recent studies have used non-linear lenses, like complexity theory (e.g., Sumara & Davis, 2006) or rhizomatics (Deleuze & Guattari, 1987), to frame and expand analyses of teachers' learning across their professional careers (Cochran-Smith et al., 2014; Ell et al., 2017; Garner & Kaplan, 2018; Keay et al., 2019; Sinnema et al., 2017; Strom, 2015). For example, in response to the variety of possible outcomes from teacher education programmes, Ell and her colleagues (2017) used to examine teachers' initial learning. Rather than seeking out singular or linear causes, the researchers analysed 'maps of influences' to better understand this variability. For Opfer and Pedder (2011) a complexity theory lens on teachers' learning beyond their initial teacher education (ITE) emphasised the unpredictability of outcomes in professional development, explaining how teaching knowledge is not exclusively internal or external to individual teachers, but rather emerges from the recursive actions among all elements of a

learning system (p. 388). These analyses and their implications for teacher education and research serve to further unsettle the discourses of cause and effect that have come to implicitly and explicitly frame teacher learning.

Research that encourages us to sustain attention on the inherent complexity of the phenomenon creates possibilities to appreciate teacher learning beyond the artificial boundaries imposed by neoliberal attempts at measurement and accountability in education (Keay et al., 2019; Sleeter, 2008; Strom, 2015). Non-linear understandings position teacher learning not as a means to an end, or packageable product, but as an ongoing and recursive process that should be supported as complex rather than restrained or simplified (Garner & Kaplan, 2018: Keay et al., 2018). Part of a larger study examining learning and change in a secondary literacy teachers' book club, our present analysis joins those studies that conceptualise teacher learning as not *also*-understood through non-linear and network perspectives, but as *better*-understood from this standpoint.

In addition to conceptualising teacher learning as complex and non-linear, we join researchers whose work acknowledges all learning as distributed across and among sociomaterial networks (Edwards & Clarke, 2002; Lee, 2019, Sundström Sjödin & Wahlström, 2017). Rather than dissolving boundaries between human and more-than-human entities, Latour and others encourage us to look beyond the limits of those and other pre-established categories, since '*any thing* that does modify a state of affairs by making a difference is an actor' (Latour, 2005, p. 71, emphasis in original). Since our research enquires into teacher learning and change, we were drawn to onto-methodological frames that permit and require the consideration of all possible actors woven together inside specific coordinates of space-time (Semetsky, 2006). By engaging actor-network theory (ANT) in this analysis, we seek to 'better understand interactions of

humans, nonhumans (such as educational objects, texts, curriculum), and resultant actor-networks' (Lee, 2019, p. 70).

As a non-linear sociomaterial conceptual framework, ANT illuminates possibilities of how learning occurs by tracing backward through networks of coemerging (Lee, 2019) human and more-than-human (Nxumalo, 2012) actors across time. ANT supported and informed our analysis of data generated through qualitative methods, as described in the next section. Through this backwards-tracing illumination of possibilities, we present in this article the learning and change that developed in a sociomaterial network of secondary literacy teachers reading professional literature in a teacher book club. We highlight how enrolment in counter-networks, such as the broader network with which the book club was connected, might disrupt traditions of teaching as (re)produced through a powerful, stable network maintained through policies and practices like high-stakes standardised testing. Then, after grounding our discussion in the empirical study from which this analysis grew, we discuss the aspects of ANT we drew from and present the new understandings produced through this analysis. Finally, we provide some further discussion and possible implications.

Study Background & Context

Data for this analysis were generated through a longitudinal qualitative enquiry into the experiences of a shifting group of secondary English Language Arts (ELA) teachers engaged in self-initiated professional learning through a book club. As former ELA teachers and teacher educators, we agree that teachers' professional learning should increase capacity for professional autonomy (Kennedy, 2014), and the book club examined here was a space through which and in which teachers self-organised their professional learning (Keay, et al., 2019). So, although we were members of the book club at various times, we were not leaders or facilitators. This study took place at various locations near a large university in the Southwestern United States,

including a high school located in an adjacent urban emergent (Milner, 2012) community. Several literacy teachers at this school were active members of the local chapter of the National Writing Project. The local Writing Project chapter (LWP), affiliated with the university, was a progressive community that embraced a student-centered, workshop approach to teaching reading and writing (e.g., Bomer, 2011; Ray, 2001) and that pushed back against deficit narratives of students, both generally as young people and specifically as students from marginalised communities whose home literacy and language experiences do not always align with the White, middle-class practices typically valued in US schools (Bomer, 2017; Borsheim-Black & Sarigianides, 2019; de los Ríos et al., 2019; Ladson-Billings, 2006; Urrieta, 2010).

After attending the LWP summer intensive institute, one 10th grade ELA teacher, Sebastián (all names are pseudonyms, except for the authors), became frustrated in his attempts to implement the practices and perspectives advocated for in the LWP. To support his transition, a friend from the institute gave him a book about workshop teaching. Two members of his grade level teaching team who were also part of the LWP, Stacia (Author 3) and Grant, suggested forming a book club, starting with this gifted text, as a way to continue conversations and develop practices (see Table 1). Jessica and Charlotte (Authors 1 and 2), who were acquainted with the book club members through their participation in the same LWP and were graduate students at the time of data generation, were also invited to join. Over a six-month period, the group read and discussed practitioner texts about using workshop approaches to teach writing and reading, focusing on selecting materials that echoed the LWP's ethos of reframing *all* students as capable, strategic writers and readers in school spaces. The group was both a professional and social endeavor, meeting outside the school day at various local establishments. When the school year ended, Grant and Stacia left the school and the meetings came to a natural conclusion.

Sebastián initiated the second iteration of the book club, and thus the continuation of this study, the following year. While he was feeling more established and optimistic in the development of his own teaching practices, he was eager to re-establish this space in order to offer support to Claire, a new colleague on his grade-level team. When she began, Claire was still part of an ITE programme that counted her first year of professional teaching as her practicum requirement. This situation, that her practicum coincided with her first teaching position, offered a disruption to the notion of a linear path of teacher development, from ITE to the professional sphere, a disruption that was furthered by her participation in the book club and membership in multiple, overlapping networks.

Table 1

Book club communities

Book Club	Meetings	Members	Text(s)
First Book Club	Dec 2014 - May 2015 *8 meetings total*	Sebastián: ELA teacher Grant: ELA teacher Stacia*: ELA teacher Jessica: graduate student Charlotte: graduate student	*The Writing Workshop: Working Through the Hard Parts (and They're All Hard Parts)* by Katie Wood Ray (2001) *Writing a Life: Teaching Memoir to Sharpen Insight, Shape Meaning —and Triumph Over Tests* by Katherine Bomer (2005)
Second Book Club	Sept 2015 - Dec 2015 *5 meetings total*	Sebastián: ELA teacher Claire: ELA teacher Jessica: graduate student Charlotte: graduate student Stacia*: graduate student	*Building Adolescent Literacy In Today's English Classrooms* by Randy Bomer (2011)

*In these networks, roles were always being interdefined and (re-)negotiated, which can make representation complicated. Stacia, who was a teacher member of the first version of the book club left her teaching position to pursue graduate study locally before the second version began. Sebastian invited her to be part of the second book club, and in the same year, as a member of the LWP network and a graduate student, she also was employed to provide some PD at her former school.

Across both of the teacher learning communities involved in this study, data were generated in various ways, including audio-recordings of book club meetings, artefacts from teaching, and semi-structured and artefact-driven interviews for focal participants (see Table 2).

At the beginning of the second book club, we intended to focus a traditional qualitative case study around Claire. While we did not know what would happen in the book club, we were confident we would develop meaningful questions to guide our engagement with the new data, especially informed by our analysis from the first book club and further supported by Sebastián's initiative to re-establish it. However, after several analyses using various theoretical lenses, we found that human-centered sociocultural frames did not adequately work to explain what happened in the second iteration; we needed to expand our thinking in order to account for complexity. In collaborative discussions about the data from this project, actor-network theory emerged as a means through which we might read/re-read this 'resistant data' (Levy et al., 2016) to produce new understandings about how sociomaterial networks mobilise particular teaching practices and perspectives.

Table 2

Interview data chart

Participant	Dates	Length	Topics Covered
Sebastián	2015/10/07	1:20:50	history/philosophy of teaching; current involvement in communities
	2015/11/16	1:25:54	
	2016/07/30	0:58:15	artefacts from teaching; links to involvement in communities
	2017/06/11	1:50:51	history/philosophy of teaching; current involvement in communities
		5:35:50 total	history/philosophy of teaching; current involvement in communities; reflection on previous book club participation
Claire	2015/10/09	0:40:25	history/philosophy of teaching; current involvement in communities
	2015/11/19	0:35:30	
	2016/08/14	0:26:38	artefacts from teaching; links to involvement in communities
	2017/06/10	1:04:30	history/philosophy of teaching; current involvement in communities
		2:47:03 total	history/philosophy of teaching; current involvement in communities; reflection on previous book club participation
Grant	2017/06/09	1:12:13	history/philosophy of teaching; current involvement in communities; reflection on previous book club participation
		1:12:13 total	

Engaging Actor-Network Theory for Analysis

While we were initially unsure about how to engage with what we first deemed an 'unsuccessful' professional learning experience, ANT provided a way to understand *how* the changes we expected did not occur and helped us explore some of the complexities of non-linear teacher learning. ANT is a perspective for considering how learning and change happen (or do not) by tracing learning and interactions backward through networks of human and more-than-human (Nxumalo, 2012) actors across time. Non-linear, sociomaterial frameworks, like ANT (e.g., Callon, 1999; Latour, 1996), offer flexible, destabilising analytic tools for creating a complex conception of how humans and the material come together in networks of activity (Fenwick, 2010). Since ANT is not a stable and isolable entity, rather than defining what ANT is, we endeavor here to explain what it does and how it was useful for our particular analysis. In addition to offering a methodology, ANT is an ontology that requires a fundamental reconsideration of how interactions among human, material, and other actors produce change and continually redefine the roles of the actors. For example, Fenwick and Edwards (2011) describe how a common object, like a textbook, is actually the mobilisation of a complex network as well as an actor within other networks:

> A textbook or an educational article, for example, each bring together, frame, select and freeze in one form a whole series of meetings, voices, explorations, conflicts, possibilities explored and discarded. Yet these inscriptions appear seamless and given, concealing the many negotiations of the network that produced it. And a textbook or article can circulate across vast spaces and times, gathering allies, shaping thoughts and actions and thus creating new networks. (p. 5).

Instead of assuming *a priori* categories, contexts, and relationships, ANT analysis requires us to look backwards at how human and more-than-human actors within networks enrol and interdefine

each other, constituting a completely reversible network (Callon, 1991) that produces effects such as knowledge, processes, objects, practices, and social customs.

This perspective demands that we decenter humans in our understanding of social systems and processes, instead offering a symmetrical view of human and more-than-human elements in a network that is always socially and materially constituted. Fenwick (2010) argues that work life is always already entangled with material practice, technologies, nature, or objects of all kinds, yet is often unacknowledged in the preoccupation with human activity. Shifting from a human-centered approach to one that also pays attention to the sociomaterial makes ANT especially useful for studying teacher learning, where the everyday decision-making of teachers is inherently enmeshed with material objects such as texts, technological tools, curricular documents. Thinking with ANT also requires unsettling categories (e.g., informal and formal learning or individual and collective learning) that have become problematic conventions. This unsettling allows us to look at teacher learning as a potential effect of network interactions, opening new possibilities for understanding teacher learning and change beyond traditional, linear professional development contexts. In our analysis for this paper, using ANT to understand teacher learning shifted our research focus from individual participants or even groups to a focus on understanding the stability and functioning of networks that impact teacher learning.

Translation

Activating ANT demands considering how/whether change happens by tracing backwards through networks and across time. Thus, change, or resistance to change, is an effect of the extension or creation of networks. According to Law (2008), 'instead of asking why things happen, [ANT] asks how they occur' (p. 268). Understanding how things occur requires us to follow actors backwards through a network, but it is important to consider that network actors are 'postestablished, not pregiven' (Miller, 2013, p. 56). In other words, we cannot understand or

label the interactions among actors, or their relationship with one another, before they occur. In a network analysis, we follow postestablished actors backward to understand both how the network came to be and whether the network is stable enough to produce portable effects through the process of *translation*, in which a network forms, becomes stable, and draws other entities toward it. So, we shifted our view of the LWP as a human-centred learning community with an embedded hierarchy in order to re-conceptualise it as a complex network.

Translation is comprised of four 'moments': *problematisation, interessement, enrolment, and mobilisation* (Callon, 1999). In a moment of *problematisation*, a common problem becomes an 'an obligatory passage point' for potential actors, creating parameters for which actors may be included or excluded from the budding network. The potential actors then become *interessed*: as the network forms, new actors move, through 'persuasion, force, mechanical logic, seduction, resistance, pretence, and subterfuge, etc.' (Fenwick & Edwards, 2010, p. 10), into the roles available to them. Then, they begin negotiating roles and interdefining each other in the moment of *enrolment* in the network. If enrolment is successful, these roles and definitions become stable, and the network is *mobilised*. A mobilised network is one that is portable and able to represent the complex assemblage of actors across situations, time, and space. Translation—as opposed to models of transmission or diffusion—implies actors are not passive recipients of innovations, knowledge, claims, artifacts, etc., but instead transform and are transformed by the other actors and the resulting effects, defining how they fit within their project and context. Therefore, translation is not a side effect of innovation or implementation: the innovation or implementation only happens as a result of translation (Latour, 1996).

Network Stability, Black-boxing, and Power

Networks sometimes become stabilised or sedimented, creating 'black-boxed' entities (that is, systems that appear to be closed off) that become less noticeable when they continue

functioning as we expect. However, even the most stable of networks is still completely reversible (Callon, 1991); therefore, even black-boxed networks are better described as stable-for-now. For example, while we typically think of a car as a singular, stable object, it is actually a complex assemblage, a network of connected actors coming together to perform a particular function. In this case, the internal components become a black box as they work together; we do not see the complex functions and individual parts, just the car functioning as a single thing. However, this network becomes visible to us again when there are disruptions in the stability of that network: when the car will not start, the various elements of the network appear as we attempt to understand why. In other words, when a previously black-boxed network falters, the network becomes visible and we see that some actors within that system are not performing their assigned roles. This same principle can be applied to human behavior as well. While we might view a teacher's instruction as a purely cognitive or socially constructed practice, ANT challenges us to see this phenomenon as the effects of a complicated and dynamic network that includes the teacher as well as many other actors (like the whiteboard, the district curriculum, professional learning communities, students, texts they teach, and so on). This complex network is mobilised, however temporarily, to perform a particular function (e.g., instruction).

Similarly, through an ANT lens, power is not located within individuals or even specific texts or experiences; instead, both knowledge and power are performed as the result of the mobilisation of an entire network. Many linear conceptions of teacher education explicitly or implicitly rely on hierarchical flows of power (e.g., top-down policies and initiatives, socialization of newcomers by veterans, and so on); others include attention to individual teacher agency, placing the onus of change within individual teachers' decision-making. ANT, however, conceptualises power as the network's ability to enrol more actants and its stability in maintaining connections and interdefined roles (Latour, 1992). Teacher learning and change,

when viewed through an ANT lens, are not just related to internal beliefs, cognition, or motivation, nor are they the result of external, top-down policies and practices imposed on individuals. Instead, teacher learning and change the result of mobilised sociomaterial networks: larger, more stable networks are inherently more powerful and thus more likely translated to classroom practice.

So, in this analysis, engagement with ANT produced questions about how the process of translation may happen in material-human-discursive networks devoted to problems of literacy learning, such as the production of teaching practices and perspectives that challenge the traditional, teacher-centered status quo. Many of these traditional teaching methods and beliefs are supported and circulated through the stable and powerful, and largely invisible, network we identified as connected with traditional teacher-centred teaching methods. We also explore how the stability and power of a counter-network—in this case a National Writing Project site (LWP)—may be supported through ever-shifting, less-stable, peripheral networks—such as a teacher book club.

Activating ANT to Understand Teacher Change

Although our analysis began with Claire's experiences in the second book club, once we began to engage ANT we immediately recognised a need to interrupt our focus on Claire as an individual, and instead enquire into the ways the actor-networks she was connected to were functioning. This enabled us to view change as a possible effect of a constellation of overlapping and competing networks**.** In this section, we discuss the outcomes of our analysis, the result of activating ANT to produce new understandings about teacher change through the data generated in our study. As mentioned before, our understandings of these networks developed from tracing backwards, looking back across time, through relationships, using ANT concepts. For clarity, the outcomes are presented here chronologically according to their occurrence, even though our

analysis moved through cycles moving generally in the opposite direction. We begin by presenting the nature of and relationship between the larger networks we determined to have been at work beneath the immediate surface of the activities and interactions we observed. Then, we explain the teacher book club introduced earlier as a peripheral network in relation to one of those main networks. After re-establishing differences between two iterations of the teacher book club, we explore the changes that did not occur in the latter as a function of moments of translation, not a product of any individual actor's choices.

Tracing Relevant Networks

One of the unique challenges and affordances of ANT perspectives is scaling. Because every actor can also be broken down into smaller assemblages of actors, those drawing on ANT must make decisions about which networks to analyse—which black-boxes to open and/or which deteriorated networks to reassemble for analysis. For our current analysis, we traced back to two generally stable and related networks—one larger and better-established, and the other a counter-network.

The first large, stable network is what we refer to as Traditional ELA Teaching (TET). We see the effects of this network as including several practices that are so ubiquitous they might circulate without attracting particular notice. These practices include: teacher- and text-centered, whole-class study of canonical literature; assigned writing as literary response or analysis; and prescriptive grammar instruction (e.g., Applebee & Langer, 2011; Brauer & Clark, 2008; Deane, 2018; Kiuhara et al., 2009). We also see the effects of the TET network as including particular perspectives, including deficit views of students' motivations and abilities, prioritising college and career readiness, and "whitestreamed" (Boveda et al., 2019; Urrieta, 2010) understandings of reading, writing, and speaking (e.g., Bomer, 2017; Borsheim-Black & Sarigianides, 2019; Brass, 2015; de los Ríos et al., 2019).

Many of the practices and perspectives mobilised through this TET network are maintained through negotiations and translations among actors across international, national, state, and local contexts, partially, through immutable mobiles (Latour, 1986), easily transportable objects whose form and function remain relatively stable across contexts. In the TET network, these immutable mobiles included actors like standards, policies, and high-stakes tests. Just as others have noted about very stable networks (Fenwick & Edwards, 2010), we see the TET network as often invisible in its ubiquity: many teachers are actors within the TET network by default, often without consciously being aware of their enrolment.

The second network we identified was a local site of the National Writing Project, which we refer to as the Local Writing Project (LWP). At the local community level, this network is also quite stable: actors mobilised through this network are recognisable to those within and outside of the community. Like the TET network, the effects of this network include both practices and perspectives. Practice effects are primarily associated with workshop approaches to teaching reading and writing (e.g., Bomer, 2011; Ray, 2001). These include routines and structures for delivering instruction (e.g., minilessons, one-on-one conferences during independent work time) and guidelines for the content of teaching (e.g., strategy instruction connected to 'real world' reading and writing practices, following students' interests).

In addition to these practices, the LWP network effects also include some specific perspectives. Actors mobilised through this network, including teachers, embrace critical, culturally sustaining approaches to literacy teaching, maintaining appreciative views of their students, teaching literacy as advocacy work, honoring students' existing lived and literate experiences, and supporting student agency in and beyond the classroom (Bomer, 2017; Land, Taylor, Lavender, & McKinnon, 2018; Rubin & Land, 2017; Skerrett, 2013; Warrington et al., 2018; Vetter, 2010; Zapata et al., 2015). As one might notice, the beliefs and practices mobilised

through the LWP oppose or challenge those of the TET, making the LWP network a *counter-network* (Lee, 2019) that works to interfere with the enrolment and mobilisation of the the more powerful and stable TET network.

The LWP counter-network, like TET, is also maintained through black-boxed, immutable mobiles as exemplified in the citations used in this section already as well as in book-length practitioner texts (e.g., Bomer, 2005; Bomer, 2011; Ray, 2001) circulated among teachers in the LWP. One text, written by Bomer (2011), is a particularly important actor within this network and is sometimes playfully referred to in the LWP as the 'blue bible' (e.g., book club transcript, 2015/09/21; Grant, interview, 2017/06/09) or '*BALTEC*' (e.g., book club notes, 2015/01/26; Claire, interview, 2016/08/13; Sebastián, interview, 2015/10/07). It is used as a core reading during the four-week intensive summer institute and frequently plays a role in weekend workshops throughout the year, in informal conversations, and in classrooms.

Teacher Book Club as a Peripheral Network

The teacher book club examined in this piece is separate from, but meaningfully connected with, the stronger, more established LWP network. In order to highlight this complex relationship, we have come to call the teacher book club a *peripheral network*. Over time, actors in the book club network included tenth-grade classroom teachers, graduate student researchers, the Bomer (2011) text, as well as an array of spaces (e.g., classrooms, local coffee shops), people (e.g.,the tenth-grade Language Arts PLC), and tools (e.g., writers' notebooks). As noted previously, there were two iterations of our book club, and in both iterations the moment of problematisation was extending the LWP network, mobilising actors and further (re)producing the LWP perspectives and practices in more classrooms. Table 3 provides an overview of the translation 'steps' across both occurrences of the book club.

Table 3

Overview of ANT's 'translation' (Callon, 1999) alongside participants' experiences

Moments of translation	Brief explanation	First book club iteration	Second book club iteration
problem-atisation	*parameters are created for a common problem among potential actors*	How can the LWP network be extended (to include Sebastián and his teaching practice)?	How can the LWP network be extended (to include Claire and her teaching practice)?
interessment	*actors pass an obligatory passage point to become engaged ('interested') in a common problem*	Despite his early frustration, Sebastián wanted to 'do better' for students. Initially, he also felt 'peer-pressured' to join the book club.	Claire was invited by Sebastián to join the book club. She was excited to learn strategies and develop relationships to help her 'survive' her first year of teaching and fit in with her grade level team.
enrolment	*interested actors continuously negotiate and interdefine roles*	Sebastián first felt like the book club was aimed at supporting him. Over time, he became a more active participant, contributing ideas in meetings and enacting changes in classroom practices.	The book club was a space to unpack black-boxed concepts, providing Claire with chances to develop knowledge and explore new perspectives about literacy teaching.
mobilisation	*roles and definitions become stable and network is mobilised by portable effects, serving as 'spokespeople' for the network*	Through his talk and his enacted performance, Sebastián translated LWP network effects into classroom practice; he was mobilised as a spokesperson for the LWP network.	As the book club dispersed, Claire selectively kept practices from the LWP, but she was more actively engaged by other, more powerful competing networks, such as the TET.

As a peripheral network, this book club was much less powerful and stable than the LWP itself. However, being less powerful came with a lower threshold for becoming interested, or engaged in the network as a way of addressing the problem. Before the first iteration of the book club, Sebastián was interested in the larger LWP network during the four-week, intensive summer institute in 2014. Throughout this experience, Sebastián and the other actors in the LWP network began defining themselves and one another in relation to each other. While he left the summer

institute enroled in that larger network, he faced resistance in interesting and enroling other actors, including his students, and negotiating the inherent opposition between the TET and LWP networks. In other words, the LWP network did not sufficiently displace the seduction of the powerful TET network, which was also competing for actors in that space through a focus on high-stakes standardised tests and the traditions of teacher-centered, literature instruction in ELA classrooms. Already actors in the LWP network, two members of Sebastian's grade level team, noticed this problem and sought to create a smaller, peripheral network to support the mobilisation of the LWP network through Sebastián's practices and perspectives.

That function, of extending the network to include Sebastián and his classroom, became the obligatory passage point through which actors were included or excluded from the peripheral book club network (see Figure 1). Through this peripheral network, the first iteration of the teacher book club, Sebastián became further engaged in the LWP network. All of the actors in the network were both changed by and changing the other actors as we negotiated roles and built connections, and when the network dissolved Sebastián, both through his talk and his enacted performance, translated the effects—both the practices and perspectives—of the larger LWP network into his classroom practice (see also Rubin & Land, 2017). Many practices and perspectives, evident across Sebastián's interviews, were translated into the network of Sebastián's classroom (e.g., strategies for creating poetry from notebook entries, a unit of study for students to inquire into their own reading habits and routines, a classroom library with contemporary books from diverse authors, opportunities for students to feel "heard" in the classroom and school, collaboratively written and revised classroom community contracts to support a generative learning environment, speaking back to and questioning deficit discourse about his students). These network effects highlighted how Sebastian and the other actors in his

classroom (e.g., the students, the texts, the tools and materials) were mobilised, the network of his classroom a stable-for-now spokesperson for the larger LWP network.

For example, when asked to bring artefacts that exemplified his teaching, one item that he brought was a copy of an entry from a student's writing notebook. As he discussed the entry, he described the teaching practices that supported that example of student writing, and also emphasized how this entry highlighted "the human element" that he valued in his work and offering students choice in their writing (interview, 2015/11/16). We see this as more than, separate from, a teacher changing his practices. Through his enrolment in the LWP network, Sebastián was redefining his role as a teacher, and creating opportunities for students to be interested into the expanding network's newly available roles as writers whose connection with others, including teachers, was complex and non-hierarchical. The notebook itself was not simply an assignment or a collection of blank pages, but an actor in the network as well, continually redefining its own relationships with other actors and reflection of ways the values and perspectives of the LWP network were mobilised.

The learning produced collectively through the book club network was able to continue to unfold and create new connections because, as a peripheral network, it successfully drew actors toward the more stable LWP network. With Sebastián's passage through the obligatory passage point (see Figure 1) to the LWP network, the urgency of the peripheral network faded and its members were drawn back into ongoing redefinitions of roles and relationships that maintained the LWP network. In other words, the book club network did not replace the LWP network, but provided a space with fewer actors and fewer relationships to negotiate, a space in which black-boxed concepts could be safely opened up. A significant effect of interessment in the book club network was Sebastian's continued enrolment in the LWP network.

Figure 1

Relationship between peripheral book club and larger LWP networks

(INSERT FIGURE 1 HERE)

The following year, Claire, a first year teacher, joined Sebastián's ELA 10th grade team. Noticing her confusion about workshop teaching and disconnection from the LWP network, Sebastián's shifting perceptions of his role in the LWP motivated him to interesse and enrol Claire in a second version of the book club. The obligatory passage point in this new peripheral network was again a question about how the LWP network becomes extended in ways that affect teacher practice and perspective, particularly for a new teacher with no previous connections with the established LWP network or its effects. Other actors, such as the three researchers (Authors) and '*BALTEC*' (Bomer, 2011), were also interested in this new/reactivated peripheral network, as each of these actors (Sebastián, the researchers, and *BALTEC*) found easier paths through this obligatory passage point than through other routes to their ultimate goals (see Figure 2).

Figure 2

Selected actors' interessement in second book club (adapted from Callon, 1999)

(INSERT FIGURE 2 HERE)

As Callon (1999) describes, actors become interested through several different mechanisms, including force, seduction, 'simple solicitation if B is already close to the problematisation of A' (p. 72). Simple solicitation was all that Claire and the researchers needed to become interested in this peripheral network. Their own motivations were closely aligned with Sebastián's and the overall function of the LWP network. The text, *BALTEC*, was physically corralled within the network, as Sebastián hoped to join forces with both the text and the researchers in building alliances with Claire. Through this process of interessement, 'identities [were] consolidated and/or redefined' (Callon, 1999, p. 72). For example, in the first book club,

the researchers were positioned as experts while Sebastián felt unconfident, this time Sebastián was negotiating a leadership role in the group and was the expert who aimed to facilitate Claire's interessement.

As a function of recruiting her to the LWP counter-network, the book club network was also positioned to intervene between Claire and other competing networks that were simultaneously attempting to enrol or maintain her enrolment. Competing networks included her concurrent Master's program and the large, powerful TET network, neither of whose network effects aligned with those of the LWP. The other book club actors hoped the smaller, peripheral network of the book club would act as a current in a stream feeding into a larger river, pulling Claire into the LWP network, as it had done with Sebastián. Successful interessement achieves enrolment in the network, where identities are 'determined and tested' (Callon, 1999, p. 76). Claire was easily interested into the book club network. She saw the group as a helpful space for building relationships with more experienced educators, for deciphering some of the activities shared in the 10th grade team (of which several teachers were also LWP actors), and for helping her 'do a good job' (Claire, interview, 2015/10/09) and survive her first year.

Across the book club meetings, the actors discussed both practices and perspectives of the LWP. *BALTEC* acted as an authority, with selected passages pointed to and revoiced by other actors and with topics from the text creating boundaries , reigning in talk that strayed too far from the practices and perspectives of the LWP. Claire's talk in the group, as might be expected for a first-year teacher, often focused on the functional aspects of the practices. But, LWP perspectives arose and demanded consideration alongside practical concerns. For example, in the beginning of the first meeting, Claire noted that her attempts to implement independent work time for students felt like it was opening space for disengaged or even unruly classroom behavior. Sebastián took up this topic, reframing students as 'completely oppressed' (book club transcript, 2015/09/02)

across the school day. Sebastián's talk, besides offering practical tips he had learned, such as explicitly teaching students about their role and the teacher's role in a workshop, also created an alternate narrative for student resistance: the teacher-centered instruction and deficit perspectives students interacted with across their school day.

This version of the book club took place during the first half of an academic year and dissolved when Sebastián had to leave the city and school to help care for his family. The researchers, however, were able to keep in touch with Claire to some degree—through events and relationships with other teachers at the school and formal PD Stacia began there later that year—and through continued interviews. Over time, through her participation in peripheral LWP networks, like the book club and her grade level team, many LWP practices were activated through Claire's teaching. She described making space for this possibility, saying 'Okay, I'll try it. Why not? The whole team's doing it. I guess I can't be that strange person doing worksheets over here' (interview, 2015/10/09). She started planning her own minilessons, incorporating more choice in topics to write about or texts to read, using writers' notebooks with her students, and adding more opportunities for students to reflect on their work.

However, by the end of our study, two years later, despite the emergence of some LWP-related practices, Claire's perspectives on students remained largely the same as when she began. Ultimately, rather than blurring traditional hierarchies between students and teachers, she did not trust students to be decision-makers in their learning. Rather than creating opportunities for critical, culturally sustaining reading experiences, Claire often relied on texts traditionally taught in US English language arts classrooms (e.g., *The Catcher in the Rye*, 'The Tell-Tale Heart,' 'The Lottery') and, despite their prominence in the book club, never mentioned activities or strategies related to 'critiquing social worlds and assumptions' (Bomer, 2011, pp. 110-115).

For example, in one of her last interviews, Claire described a book study she did with one of her classes.

I made a graphic novel for *Catcher in the Rye* because I didn't want to… I didn't want to turn a book into an assignment. So I was like, 'Okay, we are going to randomly draft out chapters, and you're going to illustrate it.' And they were like, 'Cool. We're coloring.' 'But actually, you're visualising. Surprise, you're visualising and doing a summary! I got you!' (Claire, interview, 2017/06/10)

While the TET network typically prioritises teaching *books* rather than focusing on teaching strategic *readers*, the idea of not turning a book 'into an assignment' is associated with the LWP (Bomer, 2011, pp. 123, 133-134). Visualising is also an important way of thinking about reading espoused by the LWP (Bomer, 2011, pp. 91-93). However, Claire's description of this activity does not demonstrate the perspectives of the LWP. Here Claire's predominantly Latinx students from working class families were required to read a teacher-selected, whole-class canonical text centered on a straight, upper-class, white-male character's struggles and anxieties and were not, based on her description in the interview, approaching that text from a critical perspective (Borsheim-Black et al., 2014). Additionally, the LWP viewed literacy teachers' objective as '[providing] students with transparent, durable tools that they can use in life outside school, not to make up clever assignments that tell them what to think or force them to write from false premises' (Bomer, 2011, p. 123). Yet, here Claire, as the teacher, was positioned as the decision-maker, while her students were positioned not as strategic readers, but as students who were to behave obediently and needed to be tricked into thinking deeply about a text. While some of Claire's practices were recognisable as 'workshop teacher' on the surface, her negotiations with those practices and relationships with other networks prevented the mobilisation of perspectives from the LWP network.

Further Discussion

Mobilisation happens when the network effects (e.g., knowledge, practice, perspectives, product) become stable-for-now and portable. As a powerful and often invisible network, TET is mobilised and maintained through countless human and more-than-human actors, some of whom may not recognise their enrolment or mobilisation. As a counter-network, the LWP produces practices and perspectives in contrast to those of the TET. Part of the potential for peripheral networks, like the book clubs discussed here, is the space it provides to open the 'black-boxes' of these larger networks making them, and their network effects, more visible to actors. Supported by established actors already enroled in the LWP counter-network, Sebastián was able to use the peripheral book club network to continue navigating the differences between the LWP and the TET, negotiating his role in the LWP network, and ultimately further disconnecting from the TET network. The mobilisation of the practices and perspectives of the LWP, as we saw in the data generated, were not simply produced by his actions or choices, nor a replicable professional development experience. Rather, the changed practices and perspectives, the learning, was (one of) the effect(s) of complex interrelated actors in a network, only a few of which we introduced here.

Although the low threshold for joining the book club interessed Claire to that peripheral network, ultimately, the book club, as a peripheral network, failed to enrol Claire to the more stable counter-network of the LWP. Linear approaches to understanding teacher learning might struggle to make sense of this, or dismiss the lack of enrolment completely. However, ANT and other non-linear approaches support a significant and growing ontological turn in teacher education research, one that 'focuses on the process(es) of teaching rather than outcomes alone' (Strom, 2015, p. 331). In order to also be mobilised as a spokesperson for the LWP network, Claire would have had to first enrol and negotiate her role in this counter-network. In addition to

countless other factors, this would have demanded a renegotiation of her implicit role in the TET network, and a disconnection from its mobilised practices and perspectives. However, the TET network is powerful and stable. Unlike Sebastián, whose history and identity as a student and teacher within the TET network were quite complicated (see Rubin & Land, 2017), so much of Claire's history of successful experiences and other activities, such as the ongoing support from her ITE program, were deeply entwined with the practices and perspectives of the TET network. In tracing back through Claire's engagement in the book club, the problematisation that sparked her interessment in the book club was about daily tasks and practices. She was looking for support in figuring out the practices her team was encouraging her to use and "surviving" her first year of teaching—not support in re-conceptualising learners and literacy. So, the problem that initiated her involvement was ultimately solved by the book club itself (and grade level team) and did not require interessement or enrolment in the larger LWP network. Thus, some effects were mobilised in Claire's practices, but her problem was never about perspectives, and those remained unchanged.

Across our analysis, we were encouraged to recognise the complexity of the peripheral network itself; while it was not successful in enroling Claire, the second iteration of the book club demonstrated the strength of Sebastián's mobilisation as a spokesperson for the LWP network, further disrupting his ties to the TET network. His choice to re-read the *BALTEC* text (Bomer, 2011) also emphasises his understanding of his own learning as non-linear and recursive, highlighting the significance of making space for teachers to revisit and elaborate on their own learning (Keay et al., 2019). More generally, using ANT accounts for the potentially significant contribution of texts to the relationships that form a network. Immutable mobiles (such as texts, standards, curricular documents, high-stakes tests, etc.) play an important role in the maintenance and mobilisation of networks as texts are useful in 'gather[ing] new allies and creat[ing] new

networks' (Lee, 2019, p. 72). By accounting for an 'egalitarian' view of materiality, ANT offers space to recognise the ways these texts, as actors within various networks, make 'their own particular educational contributions' (Lee, 2019, p. 73). Research and professional practitioner texts aren't merely a means to transmit knowledge; they become meaningful when enroled, alongside other actors, in ephemeral or more stable networks where roles and relationships between actors are negotiated and ultimately translated into practices or perspectives. For Sebastián, the texts from the book clubs did not cause him to reconsider the roles and relationships available in his classroom; however, through conversation among all the actors in the network—including the text—each actor was involved in the process of (re)defining roles in relation to each other, ultimately leading to changes in practices and perspectives.

Although ANT opened up new possibilities to consider more-than-human actors and the non-linear nature of learning, our analysis shares an important limitation with other more linear perspectives: it was bound by a finite period of time. While we noted that the book club was positioned as an (ultimately less successful) intervening force between Claire and the other networks competing for her enrolment, we recognise all networks as dynamic. Beyond the scope of this study, network relations have undoubtedly changed and shifted. We also wondered about the role of time in the second book club, particularly because it ended somewhat abruptly. While as a team we continued interviewing Claire to see how things were going in her teaching and what communities she continued to see as important to her work, this analysis raises potentially significant questions about the importance of sustained time for negotiating roles within a network, particularly for newly or tentatively enroled members. If the second book club had remained a stable network for longer, might continued exposure to Sebastián's and others' perspectives in this more intimate, social space have altered Claire's 'problem' and enroled her in the LWP network? Perhaps the current system of educational research and publication demand a

certain velocity of change that cannot be in harmony with non-linear perspectives on learning. In all their professional learning, 'teachers need time to develop, absorb, discuss, and practise new knowledge' (Garet et al., 2001), and surely time plays a significant role in network development, but thinking of development as non-linear makes the role of time even more complex and more complicated to write about.

From an ANT perspective, teacher learning and change are not simply about internal beliefs, cognition, or motivation, but are instead the result of mobilised sociomaterial networks: larger, more stable networks are inherently more powerful and thus more likely translated to classroom practice. This shift toward examining networks, rather than individuals, flattens the hierarchical perspective on actors in a network, demanding equal consideration of the material and discursive elements of the networks teachers, like Sebastián and Claire, are part of. When we view teacher learning and change as the result of mobilised—and sometimes very powerful and barely visible—networks, it is no longer about targeting individuals or practices but is about the overall health, stability, and gravitational pull of a larger network.

Conclusion

This analysis has raised important questions for consideration around the utility of ANT for analysis of teachers' professional learning and around the nature of that learning. Significantly, this approach demands that we shift our perspective from isolatable individuals, requiring us instead to 'sustain a holistic interest in complex systems' (Opfer & Pedder, 2011, p. 396). As a non-linear *sociomaterial* framework, ANT recognises the potential for all human and more-than-human actors in a network can 'exert force on each other, join together, and expand the networks through space and time' (Lee, 2019, p. 71). Since '*any thing* that does modify a state of affairs by making a difference is an actor' (Latour, 2005, p. 71, emphasis in original), seeing the practitioner texts, the school and curriculum, and the powerful circulating discourses and policies

about literacy teaching in urban schools as actors (rather than passive elements of context) offers an important shift in our perspective as researchers and teacher educators. These frameworks are especially important when considering ways to enrol teachers in networks that push back against narrow, deficit perspectives of students and narrow, standardised ways of knowing, doing, reading, and writing. Problems can pull actors towards counter networks—when the problem is important enough to help get past obstacles that would otherwise keep them from enroling in a counter network. We hope this research supports teacher educators in considering how learning and change involve making networks visible, figuring out how to align interests or problems, and making sure teachers have access to counter-networks that might interrupt opaque systems of power, opening up black-boxed these networks and making them visible. For example, professional learning opportunities could include space for teachers to analyse their current practices and perspectives, considering where those may have come from and what they represent.

These opportunities could also include more transparent negotiations; in other words, instead of presenting new practices or perspectives and expecting teachers to adopt them with fidelity, teacher educators might open up conversation about how both the teachers and the presented practices/perspectives might be changed as they are translated into classrooms. By creating these reflective spaces, teacher educators can support teachers in understanding how powerful networks, and their effects, become sedimented over time. That recognition may spark opportunity, and inspiration, for mobilising counter-networks that challenge the status quo. More research from this perspective is needed, to remind us of the "radical possibility" of engaging analytical methods that keep us "in the threshold" of theory and method and data (Jackson & Mazzei, 2013, p. 270). By engaging meaningfully with nonlinear perspectives, researchers will continue to better understand, and better support, teachers' professional learning.

References

Applebee, A.N. and Langer, J.A., 2011. ' EJ' extra: A snapshot of writing instruction in middle schools and high schools. *English Journal*, 100 (6), 14–27.

Bomer, K., 2005. *Writing a life: Teaching memoir to sharpen insight, shape meaning--and triumph over tests*. Portsmouth, NH: Heinemann.

Bomer, R., 2011. *Building adolescent literacy in today's English classrooms*. Portsmouth, NH: Heinemann.

Bomer, R., 2017. What would it mean for English language arts to become more culturally responsive and sustaining? *Voices from the Middle*, 24 (3), 11–15.

Borsheim-Black, C. and Sarigianides, S.T., 2019. *Letting go of literary whiteness: Antiracist literature instruction for white students*. New York, NY: Teachers College Press.

Boveda, M., Reyes, G., & Aronson, B. A. (2019). Disciplined to access the general education curriculum: Girls of color, disabilities, and specialized education programming. *Curriculum Inquiry, 4*(4), 405–425. doi:10.1080/03626784.2019.1652543

Boylan, M., 2010. 'It's getting me thinking and I'm an old cynic': Exploring the relational dynamics of mathematics teacher change. *Journal of Mathematics Teacher Education*, 13 (5), 383–395.

Boylan, M., Coldwell, M., Maxwell, B., and Jordan, J., 2018. Rethinking models of professional learning as tools: a conceptual analysis to inform research and practice. *Professional Development in Education*, 44 (1), 120–139.

Brass, J., 2015. Standards-based governance of English teaching, past, present, and future? *English Teaching: Practice & Critique*, 14 (3), 241–259.

Brauer, L. and Clark, C.T., 2008. The trouble is English: Reframing English studies in secondary schools. *English Education*, 40 (4), 293–313.

Callon, M., 1991. Techno-economic networks and irreversibility. *In*: J. Law, ed. *A Sociology of Monsters: Essays on Power, Technology and Domination*. London: Routledge, 132–165.

Callon, M., 1999. Some elements of a sociology of translation. *In*: M. Biagioli, ed. *The science studies reader*. New York: Routledge, 67–83.

Cochran-Smith, M., Ell. F., Grudnoff, L., Ludlow, L., Haigh, M., and Hill, M., 2014. When complexity theory meets critical realism: A platform for research. *Teacher Education Quarterly*, 41 (1), 105–122.

de los Ríos, C.V., Martinez, D.C., Musser, A.D., Canady, A., Camangian, P., and Quijada, P.D., 2019. Upending colonial practices: Toward repairing harm in English education. *Theory Into Practice*, 58 (4), 359–367.

Deane, P., 2018. The challenges of writing in school: Conceptualizing writing development within a sociocognitive framework. *Educational Psychologist*, 53 (4), 280–300.

Deleuze, G. and Guattari, F., 1987. *A thousand plateaus: Capitalism and schizophrenia*. Minneapolis: University of Minnesota Press.

Edwards, R. and Clarke, J., 2002. Flexible learning, spatiality and identity. *Studies in Continuing Education*, 24 (2), 153–165.

Ell, F., Haigh, M., Cochran-Smith, M., Grudnoff, L., Ludlow, L., and Hill, M.F., 2017. Mapping a complex system: What influences teacher learning during initial teacher education? *Asia-Pacific Journal of Teacher Education*, 45 (4), 327–345.

Fenwick, T., 2010. Re‑thinking the "thing": Sociomaterial approaches to understanding and researching learning in work. *Journal of Workplace Learning*, 22 (1/2), 104–116.

Fenwick, T.J. and Edwards, R., 2010. A way to intervene, not a theory of what to think. *In*: *Actor-network theory in education*. Milton Park, Abingdon, Oxon ; New York: Routledge, 1–23.

Fenwick, T.J. and Edwards, R., 2011. Introduction: Reclaiming and renewing actor network theory for educational research. *Educational Philosophy and Theory 43*, 1–14.

Garet, M., Porter, S., Andrew, C., & Desimone, L., 2001. What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal, 38*(4), 915–945.

Garner, J.K. and Kaplan, A., 2019. A complex dynamic systems perspective on teacher learning and identity formation: an instrumental case. *Teachers and Teaching*, 25 (1), 7–33.

Jackson, A.Y. and Mazzei, L.A., 2013. Plugging one text into another: Thinking with theory in qualitative research. *Qualitative Inquiry*, 19 (4), 261–271.

Keay, J.K., Carse, N., and Jess, M., 2019. Understanding teachers as complex professional learners. *Professional Development in Education*, 45 (1), 125–137.

Kennedy, A., 2014. Understanding continuing professional development: the need for theory to impact on policy and practice. *Professional Development in Education*, 40 (5), 688-697.

Kiuhara, S.A., Graham, S., and Hawken, L.S., 2009. Teaching writing to high school students: A national survey. *Journal of Educational Psychology*, 101 (1), 136–160.

Kyndt, E., Gijbels, D., Grosemans, I., and Donche, V., 2016. Teachers' everyday professional development: Mapping informal learning activities, antecedents, and learning outcomes. *Review of Educational Research*, 86 (4), 1111–1150.

Ladson-Billings, G., 2006. From the achievement gap to the education debt: Understanding achievement in U.S. schools. *Educational Researcher*, 35 (7), 3–12.

Land, C.L., Taylor, L.A., Lavender, H., McKinnon, B., 2018. Making space for choice, voice and critique: critical literacy workshop in the era of Trump. *English Teaching: Practice and Critique, 17*, 28–43. https://doi.org/10.1108/ETPC-06-2017-0100

Latour, B., 1986. Visualisation and cognition: Drawing things together. *In*: H. Kuklick, ed. *Knowledge and Society: Studies in the Sociology of Culture Past and Present*. Greenwich, CT: JAI Press, 1–40.

Latour, B., 1992. '"Where are the missing masses? The sociology of a few mundane artifacts"'. *In*: W.E. Bijker and J. Law, eds. *Shaping technology / building society: studies in sociotechnical change*. Cambridge, Mass. u.a.: The MIT Press.

Latour, B., 1996. *Aramis, or, The love of technology*. Cambridge, Mass: Harvard University Press.

Latour, B., 2005. *Reassembling the social: An introduction to actor-network-theory*. 1st edition. Oxford: Oxford University Press.

Lave, J. and Wenger, E., 1991. *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press.

Law, J., 2008. On sociology and STS. *The Sociological Review*, 56 (4), 623–649.

Lee, Y.-L., 2019. Assembling technology teacher education: Translating technological skills into educational praxis. *In*: Kathleen Nolan and Jennifer Tupper, eds. *Social theory for teacher education research: Beyond the technical-rational*. New York: Bloomsbury, 69–86.

Levy, G., Halse, C., and Wright, J., 2016. Down the methodological rabbit hole: Thinking diffractively with resistant data. *Qualitative Research*, 16 (2), 183–197.

Lieberman, A. and Mace, D.H.P., 2008. Teacher learning: The key to educational reform. *Journal of Teacher Education*, 59 (3), 226–234.

Miller, A. S., 2013. *Speculative grace: Bruno Latour and object-oriented theology*, New York: Fordham University Press.

Milner, H., 2012. But what is urban education? *Urban Education*, 47 (3), 556–561.

Nxumalo, F., 2012. Unsettling representational practices: Inhabiting relational becomings in early childhood education. *Child & Youth Services*, 33 (3–4), 281–302.

Opfer, V.D. and Pedder, D., 2011. Conceptualizing teacher professional learning. *Review of Educational Research*. 81 (3), 376–407.

Ray, K.W., 2001. *The writing workshop: Working through the hard parts (and they're all hard parts)*. Urbana, Ill: National Council of Teachers of English.

Rubin, J.C., Land, C.L., 2017. "This is English class": Evolving identities and a literacy teacher's shifts in practice across figured worlds. *Teaching and Teacher Education, 68,* 190–199. https://doi.org/10.1016/j.tate.2017.09.008

Semetsky, I., 2006. *Deleuze, education and becoming*. Brill Sense.

Sinnema, C., Meyer, F., and Aitken, G., 2017. Capturing the complex, situated, and active nature of teaching through inquiry-oriented standards for teaching. *Journal of Teacher Education*, 68 (1), 9–27.

Skerrett, A., 2013. Building multiliterate and multilingual writing practices and identities. *English Education*, 45 (4), 322–360.

Sleeter, C., 2008. Equity, democracy, and neoliberal assaults on teacher education. *Teaching and Teacher Education*, 24 (8), 1947–1957.

Strom, K.J., 2015. Teaching as assemblage: Negotiating learning and practice in the first year of teaching. *Journal of Teacher Education*, 66 (4), 321–333.

Sumara, D.J. and Davis, B.A., 2006. Correspondence, coherence, complexity: Theories of learning and their influences on processes of literary composition. *English Teaching: Practice and Critique*, 5 (2), 34–55.

Sundström Sjödin, E. and Wahlström, N., 2017. Enacted realities in teachers' experiences:

    bringing materialism into pragmatism. *Journal of Curriculum Studies*, 49 (1), 96–110.

Urrieta, L., 2010. Whitestreaming: Why some Latinas/os fear bilingual education. *Counterpoints*,

    371, 47–55.

Vetter, A., 2010.Positioning students as readers and writers through talk in a high school English

    classroom. *English Education*, 43 (1), 33–64.

Warrington, A., Graeber, L., White, H., and Saxton, J., 2018. Finding value in the process:

    Student empowerment through self-assessment. *English Journal*, 107 (3), 32–38.

Zapata, A., Valdez, N., and Haworth, C., 2015. Bilingual picturebook making in the elementary

    classroom. *Language Arts*, 92 (5), 343-358.