



DIGITAL ACCESS TO
SCHOLARSHIP AT HARVARD
DASH.HARVARD.EDU



HARVARD LIBRARY
Office for Scholarly Communication

Teachers Learning: Engagement, Identity, and Agency in Powerful Professional Development

The Harvard community has made this article openly available. [Please share](#) how this access benefits you. Your story matters

Citation	Noonan, James. 2016. Teachers Learning: Engagement, Identity, and Agency in Powerful Professional Development. Doctoral dissertation, Harvard Graduate School of Education.
Citable link	http://nrs.harvard.edu/urn-3:HUL.InstRepos:36524832
Terms of Use	This article was downloaded from Harvard University's DASH repository, and is made available under the terms and conditions applicable to Other Posted Material, as set forth at http://nrs.harvard.edu/urn-3:HUL.InstRepos:dash.current.terms-of-use#LAA

Teachers Learning:
Engagement, Identity, and Agency in Powerful Professional Development

James Noonan

Dr. Meira Levinson
Dr. Howard Gardner
Dr. Jal Mehta

A Thesis Presented to the Faculty
of the Graduate School of Education of Harvard University
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

October 2016

© 2016
James Noonan
All Rights Reserved

Dedication

To my best teachers:
my parents, my wife, my children.

Thank you.

Acknowledgments

First, thank you to the teachers whose stories are reflected in the pages that follow. Given the many demands placed on teachers every day, I am especially appreciative of the time they gave to me. Trying to better understand their colorful and nuanced accounts of powerful learning, in many ways, became a lasting and powerful learning experience for me, too.

In writing up these stories, I have been fortunate to have a committee of readers – Meira Levinson, Jal Mehta, and Howard Gardner – whose insights and critiques have been unfailingly constructive and whose steadfast encouragement always reassured me that what I was writing was worth reading. I offer special appreciation to Meira, who has truly embodied the role of an advisor. Not only did she never hesitate to offer good advice, her persistent probing invariably made my arguments less assailable and my ideas more interesting.

Doctoral work can be lonely, but I have been lucky to have a community of fellow travelers, thought-partners, and collaborators. Sarah Fine, my writing partner for the last four years, saw some of the least-formed and most incomprehensible versions of this dissertation and still kept reading. This year, we graduated into a full-fledged writing group with Jenna Gravel and Tori Theisen-Homer, two brilliant and kind and eager critics. Having read some of their work in exchange, I can confirm that Sarah, Jenna, and Tori will each make lasting and valuable contributions to our understanding of teachers and schools. I was also grateful to be a member of Meira’s “LevLab” these last six years, a scholarly community that truly lives the ideals of constructive critique. Among my many cohortmates and colleagues, I offer special thanks to two who often read my work, listened to my misgivings, and gave me reasons to get outside over the years: Tim O’Brien and Shauna Brown Leung.

I have had many inspiring mentors, but I would be remiss not to mention Steven Brion-Meisels. I worked with Steven for eight years before I came to HGSE, and we met every month or two for coffee and cheesecake until he died in March 2014. But his memory was close by as I worked on this thesis (the thesis he reminded me more than once that was better “done” than “perfect”): on my office wall hung a calendar of his watercolor paintings and just outside my office window, on Brattle Street, is a bike rack installed in his memory and in honor of his mentorship of so many students and young people. Steven viewed his work as a joyful calling and an incremental step on the long road toward a more just world, and it was by his example and generosity that people like our colleague Silvia Diazgranados (Ed.D., 2016) and I hope to carry on the merest fraction of his legacy.

Speaking of legacy: neither of my parents lived to see this thesis written, but I carry them with me every day. My mother, who died just before I turned 10, was my first teacher – patient, kind, a bottomless well of unconditional love. Like her, my father was also unconditionally encouraging and a wise observer of the world. He died in 2010, not long after seeing me graduate from the Ed.M. program, but lived long enough to learn I had been accepted into the doctoral program and I know he would have been as eager to celebrate my many mistakes as he would have been delighted by my success. I am also grateful to my brother, John, who has always embodied for me the best of both our parents.

Finally, to Heidi. I was accepted to the Ed.M. program at HGSE on the same day as our first date, in March 2009. Since then, we have talked about all manner of education issues – as a teacher, she has lots of important things to say and I am privileged to listen – but more importantly she has been a steadfast source of love, laughter, and kindness. This dissertation absolutely could *not* have been written without her patience, presence, and encouragement. In particular, the long days and late nights in the final stretch left us both

pretty bleary-eyed. I am proud of the many thousands of words I've written, but they can never compare to the pride I feel as Heidi's husband and father to our two joyful, spirited daughters, Mia (age 3) and Alyse (15 months). I can think of no better reward at the end of a long day sitting in front of a computer than walking into a living room wrecked with toys, smack in the middle of which are two squealing and delighted girls. I'll be home soon.

October 2016

Table of Contents

Dedication	i
Acknowledgments	iii
Abstract	ix
I. Introduction	1
II. Why Teachers Learn: Engagement and Powerful Professional Learning	5
<i>Literature Review</i>	9
Professional Development	9
Learner Engagement and Self-Determination Theory (SDT)	12
<i>Methods</i>	16
Participant Recruitment	17
Sample	18
Data Collection	19
Data Analytic Strategy	20
Limitations	20
<i>Findings and Discussion</i>	21
Autonomy	22
Competence	27
Relatedness	33
An Integrated Case	39
<i>Implications</i>	45
<i>Conclusion</i>	47
III. Who They Are and How They Learn: Teacher Identity and Powerful Professional Learning	49
<i>Literature Review</i>	50
<i>Methods</i>	53
Participant Recruitment	53
Sample	54
Data Collection	55
Data Analytic Strategy	55
Limitations	57
<i>Findings and Discussion</i>	59
Three Cases of Alignment: The What, The Who, and The With Whom	60
Case 1: “A philosophy about teaching math” (The What)	61
Case 2: “Teaching is performance” (The Who)	70
Case 3: “The relationship always matters” (The With Whom)	79
One Case of “Superficial Misalignment”	91
Case 4: “I want him to regard me”	93

<i>Implications</i>	102
<i>Conclusion</i>	106
IV. When Teachers Choose: Teacher Agency and Powerful Professional Learning	
Learning	108
<i>Literature Review</i>	110
<i>Methods</i>	114
Participant Recruitment	115
Sample	116
Data Collection	117
Data Analytic Strategy	117
Limitations	120
<i>Findings and Discussion</i>	121
Multi-Dimensional Teacher Agency in Professional Learning	122
Agency in Powerful Professional Learning	123
Agency in Negative Professional Learning	133
<i>Implications</i>	138
<i>Conclusion</i>	140
V. Conclusion	142
Appendix A: Participant Demographics	147
Appendix B: Interview Protocol	148
Appendix C: Participant Index	150
References	152

Abstract

Professional development (PD) is seen by a broad cross-section of stakeholders — teachers, principals, policymakers — as essential for instructional improvement and student learning. And yet, despite deep investments of time and money in its design and implementation, the return on investment and subjective assessments about PD's effectiveness remain uneven. In this thesis, I focus in-depth on professional development experiences that teachers identify as their most powerful and ask what these experiences could suggest toward improving PD design, policy, and research.

Specifically, drawing on 25 in-depth accounts of powerful professional learning, I analyze PD across three papers, each of which applies a distinct analytical lens. First, using self-determination theory (Deci and Ryan, 1985, 2000), I explore the extent to which powerful learning experiences help to satisfy the three basic psychological needs of autonomy, competence, and relatedness. Second, using the growing body literature on professional identity (e.g., Beijaard et al., 2004), I posit that teachers may be motivated to pursue professional learning experiences that align with their core beliefs and identity. Extending this literature, I elaborate three distinct conceptions of how identity interacts with PD: an affinity for the *what* (content), the *who* (facilitation), and the *with whom* (community). I similarly discuss ways that powerful learning may help to form or transform teacher identity. Third, observing a pattern in the data and drawing on emerging literature on teacher agency (e.g., Priestley et al., 2015), I define teacher agency in professional learning as a multi-dimensional construct – agency over, during, and emerging from PD – and analyze the extent to which each dimension was evident in powerful and contrastingly negative

professional learning experiences. I conclude that increasing dimensions of agency may be a promising lever for improving professional learning at both an individual and system level.

Finally, by privileging teachers' unique perspectives and emphasizing the deeply subjective nature of learning, this thesis aims both to complement and complicate the existing research on PD design and effectiveness and the policy imperative for scale.

I. Introduction

“What do you think we spend on professional development each year? \$2.5 billion. But when I say that to teachers they usually laugh or cry.”

-- Arne Duncan, U.S. Secretary of Education, 2009-2015¹

“If it was a pie chart, [professional development] would be like 85 percent bad. But there’s 15 percent good.”

-- Chelsea, K-8 special education teacher for over 15 years

Professional development (PD) has long been lampooned by teachers. For that matter, stakeholders throughout the education sector – up to and including the Secretary of Education – see PD failing to live up to its promise. But most teachers, like Chelsea, would acknowledge that some PD is good, and of these good PD experiences some truly stand out. The question at the heart of each of the three papers comprising this thesis asks what educators, policymakers, and researchers can learn from these outlying learning experiences. What sets them apart from the norm? When asked to reconstruct their most powerful professional learning experiences, how do teachers make meaning of why they learned, how they learned, what they learned, who they learned from and who they learned with?

In the pages that follow, I attempt to answer these and other related questions. Each paper draws on data from interviews with 25 public school teachers across five school districts. These teachers had been teaching between four and thirty years. They taught at all levels, from preschool to 12th grade. In the stories they told, they shared how they came to

¹ See <http://neatoday.org/2012/07/10/how-should-we-support-new-teachers-arne-duncan-hears-from-neat-student-members/>

teaching and their core beliefs about instructional improvement, but they focused in depth on two professional learning experiences: their “most powerful” learning experience and a contrasting learning experience they would like “never to have again.” In asking teachers to reflect on these experiences – especially their most powerful learning experience – I was relying on a finding well-grounded in cognitive and learning science: namely, that learners’ perceptions of their learning experiences have important implications for uptake and transfer (Ames, 1992, p. e.g., Shernoff & Csikszentmihalyi, 2009). Given this, I believed that better understanding professional learning experiences that teachers perceived positively would have promising implications for PD design and policy.

In addition, I adopted a research design that sought to privilege the voices and lived experiences of teachers. Research studying the *impact* of teachers is widespread in educational research (e.g., Kane & Staiger, 2008; Rivkin, Hanushek, & Kain, 2005; Rockoff, 2004), but there is still relatively little research built around the lived experiences of teachers and drawing on the *perspectives* of teachers themselves. Even among the considerable body of PD research that seeks to understand (1) the efficacy and effectiveness of particular PD programs, and (2) teachers’ experiences of learning within these programs, much of it begins with *researchers’* assessments of PD programs worthy of study (e.g., Duncan-Andrade, 2004; Grossman, Wineburg, & Woolworth, 2001; Vaandering, 2014; Wilson & Berne, 1999). And while I deeply value the close attention to teachers’ experiences in these and other studies, in this thesis I asked teachers to select those PD experiences most meaningful to them as a point of departure for analysis. As urged by Webster-Wright (2009) in her review of professional learning research, I sought to elevate and interrogate teachers’ holistic experiences as learners. In previous theoretical work, I have suggested that PD’s uneven performance may be explained in part by a failure to fully conceive of PD as a relational and

deliberative process that privileges teachers' voices and experiences (Noonan, 2014b). The empirical work in this thesis is a natural extension of these principles and ideas.

The papers emerging from my data offer three related perspectives on the topic of powerful professional learning. In this introduction, I briefly summarize each and illustrate how they contribute to our collective understanding of professional development and teacher learning. At the conclusion of the thesis, I examine cross-cutting themes that link these perspectives.

In the first paper (“Why Teachers Learn”), I consider the motivational imperative to learn and the extent to which pursuit of three basic psychological needs – for autonomy, competence, and relatedness (Deci & Ryan, 1985, 2000) – are manifest in powerful professional learning experiences. Looking across and within cases, I examine each need in the context of multiple learning experiences and then consider how these needs converge and interact within a single learning experience. In addition, I observe that engagement or motivation is seldom considered in the descriptions or assessments of effective professional development. I suggest that such an addition to existing consensus frameworks might better model teachers' subjective experiences of learning and lead to more effective PD overall.

In the second paper (“Who They Are and How They Learn”), I probe more deeply the individual imperative of teacher learning. I use the frame of teachers' professional identity to better understand the considerable heterogeneity among teachers' perceptions of powerful PD. Mining teacher accounts for some of their “anchoring beliefs” about teaching and learning and then considering how these beliefs might be reflected or refracted by their accounts of professional learning, I present and analyze four case studies of teacher identity and teacher learning. In three “aligned” cases – that is, cases in which teachers' beliefs seemed consonant with their descriptions of powerful learning experiences – I elaborate

three distinct conceptions of teacher identity in PD: affinity for the *what* (content), the *who* (facilitation), and the *with whom* (community). In addition, I explore one “superficially misaligned” account in which a teacher’s beliefs about teaching and improvement were seemingly at odds with his powerful learning experience and consider how he reconciled this apparent dissonance.

In the final paper (“When Teachers Choose”), I elaborate a multi-dimensional view of teacher agency as it relates to PD: agency *over* PD, agency *during* PD, and agency *emerging from* PD. Drawing on this framework, I examine the ways in which agency was enacted or constrained in teachers’ accounts of professional learning. Specifically, I use these dimensions of agency to draw a contrast between powerful and negative learning experiences. Across every dimension, teachers’ exercise of agency was notably more evident in powerful learning than negative learning. Moreover, discrete powerful learning experiences tended to evidence *more* dimensions than discrete negative learning experiences. I then examine in-depth teacher accounts that reflect each dimension and conclude by observing that a multi-dimensional view of agency – insofar as it enables PD designers to identify and integrate agency into various aspects of professional learning – may be instructive for policymakers who seek to increase opportunities for teachers to experience powerful professional learning and thereby increase PD’s potential impact on practice.

Teaching and learning are complex and interdependent processes. One cannot be a teacher without also being a learner. This thesis contributes to our understanding of teachers as learners and how their experiences of learning may be made more meaningful.

II. Why Teachers Learn:

Engagement and Powerful Professional Learning

Many teachers would have no trouble imagining this scenario. At the end of a long school day, they are sitting in a room with their colleagues and find themselves sneaking a look at their smartphone – something they have often upbraided their own students for doing – maybe to check their email or social media, maybe to make a grocery list, maybe to look at their considerable to-do list for the rest of the week. Self-consciously looking up, they notice other colleagues doing the same. When a voice suddenly directs them to get into small groups and respond to a question, they snap out of their reverie and wonder what they may have missed.

This is what it looks like to be a disengaged learner, and it is in many ways a caricatured view of professional development (PD) and one shared by many education stakeholders. But even as teachers and policymakers dismiss PD as disengaging or less than relevant, many teachers would likely admit that some professional learning experiences have been notable departures from this norm, profoundly influential, inspiring, even enjoyable. In a study of professional learning among therapists (and corroborated with professionals across domains, including teachers), Webster-Wright (2010) found that many individual practitioners were dismissive of professional learning in general. But when asked about occasions when they *had* learned they enthusiastically recalled detailed accounts of authentic and powerful learning. Given this, how do teachers describe their most powerful learning experiences? How do they describe their motivations for learning? How, if at all, did these experiences change the way they approached teaching or the way they saw themselves as

teachers? Attending to the stories that emerge from these questions – stories of engaged and powerful professional learning – may have important implications for how we conceptualize, study, and design PD. Put simply: teacher engagement matters in professional learning, because if teachers are disengaged they are unlikely to learn.

Learner engagement and motivation – in particular, intrinsic motivation – have long been understood as essential for effective teaching and sustained learning.² Perhaps wary of over-complicating the concepts, Perkins (1992) offered one sentence that he said ought to be sufficient to articulate “a rather good theory of learning and teaching.” He called it Theory One³: “People learn much of what they have a reasonable opportunity and motivation to learn” (p. 45). For that matter, numerous theorists and researchers have identified a range of positive psychological and educational outcomes associated with intrinsic motivation and engagement (for a review, see Deci, Vallerand, Pelletier, & Ryan, 1991; Fredricks, Blumenfeld, & Paris, 2004). In addition, the presence of motivation has been positively associated with teachers’ participation in learning activities and application of new instructional strategies (Gorozidis & Papaioannou, 2014; Janke, Nitsche, & Dickhäuser, 2015; Shulman & Shulman, 2004). Among the best known theories related to these concepts is Deci and Ryan’s self-determination theory (SDT), which posited that individuals are driven to satisfy three psychological needs that were “universal, innate, and essential for well-being” (Deci & Ryan, 2000, p. 232): autonomy, competence, and relatedness. Synthesizing this strand of research and its implications for developing engagement strategies for use by teachers, Turner and colleagues (2014) hypothesized that “students are more engaged when

² Indeed, learner engagement and motivation are overlapping concepts in the empirical literature and thus ones that I use interchangeably in this paper.

³ Explaining the name, he said that it was “so much a rough-hewn, first-order approximation to the conditions that foster learning, that we will ...[save] the higher numbers for fancier theories” (Perkins, 1992, p. 45)

they feel related to others, competent, and autonomous and when academic learning is valued and meaningful” (p. 1201). The addition of “meaningfulness” as a dimension of engagement by Turner et al. (2014) seemed to acknowledge a need for learners to identify relevant connections between content and their interests and identities, something that may be especially important in educational contexts where autonomy can sometimes be constrained and that I take up in more detail in Chapter III. Underscoring this point, Assor et al. (2002) found that teachers were able to enhance student engagement when they made relevant connections between school activities and students’ self-initiated goals. Moreover, there is reason to believe that these principles of engagement for student learning should apply equally to teacher learning. In a synthesis of cognitive science and its implications for learning environments, Bransford et al. (2000) observed, “The principles of learning and their implications for designing learning environments apply equally to child and adult learning” (p. 27).

Given the apparent importance of motivation and engagement for learning, then, their absence from many contemporary frameworks for effective teacher professional development is notable.⁴ Decades of correlational and case study research have resulted in many promising “best practice” frameworks that lay out instrumental design elements for effective PD yet eschew explicit mention of teacher engagement (e.g., Garet, Porter, Desimone, Birman, & Yoon, 2001; Ingvarson, Meiers, & Beavis, 2005; Kennedy, 1998; van Veen, Zwart, & Meirink, 2012).⁵ Summarizing the features identified by this strand of

⁴ In general, these and other frameworks define *effective PD* by its ability to improve student learning, a causal chain that has an understandable logic but that has been persistently difficult to confirm empirically (see Desimone, 2009; Hill, Beisiegel, & Jacob, 2013).

⁵ Although not using the language of motivation and engagement, some syntheses attended more to the perspective of teachers-as-learners than others. For example, Hawley and Valli (1999, p. 138) included teacher involvement as one of eight design principles for effective PD. More recently, in New Zealand, Timperley et al.

research, Wayne et al. (2008) wrote that “it is generally accepted that intensive, sustained, job-embedded PD focused on the content of the subject that teachers teach is more likely to improve teacher knowledge, classroom instruction, and student achievement” (p. 470). In many ways, these frameworks represent movement toward respect for teachers and the complex work of teaching. After all, PD that is sustained over time is responsive to teachers’ long-standing objections to “one-shot” workshops and PD that is “job-embedded” is likely relevant and meaningful in a way that, say, outside workshops or college courses cannot be. And yet, the features identified by these frameworks remain insufficient to capture the diversity and granularity of teachers’ experience, beliefs, and interests. Merely making PD content-focused, job-embedded, and sustained will not ensure high levels of teacher engagement. And, as noted above, engagement is critically important for learning.

Taking teacher engagement as my point of departure, then, in this paper I asked how such engagement is manifested in professional learning. Specifically, I posited that engagement was the mediating force through which learning experiences were assessed. That is, a learning experience could be seemingly flawless when measured against consensus design criteria for effective PD, but that a learner who is ill-disposed toward the presenter, the material, or other unknowable factors will nevertheless be disengaged. In the pages that follow, I first briefly review the landscape of professional development as well as the theoretical foundations of motivation and learner engagement that guide my analysis. After discussing my methods, I analyze the intersection of powerful professional learning and each of SDT’s three basic needs. I then present an integrative case study of a single learning

(2007) applied principles of cognitive and learning science to theorize a pathway for effective PD, noting that teachers’ favorable interpretations of learning opportunities was essential for changing practice.

experience to consider how these needs converge and interact. I conclude with implications for PD design and research.

Literature Review

Professional Development

Defined broadly and inclusively, professional development may be understood as activities or relationships intended to support and develop teachers' instructional practice. Activities denoted as "professional development" vary widely in design and may include in-district or out-of-district workshops, college-level courses, formal or informal mentoring relationships, teacher inquiry groups, or peer observations (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009).

Professional development in education is seen by a broad cross-section of stakeholders — teachers, principals, policymakers — as essential for instructional improvement and student learning. Testifying before a U.S. Senate committee considering the reauthorization of the Elementary and Secondary Education Act in April 2010, Randi Weingarten, president of the American Federation of Teachers, suggested that federal funds ought to be marshaled to "help districts make the schools attractive places for students to learn and for teachers to teach" and added that one of the ways this could be done was through "meaningful professional development with ongoing instructional supports."⁶ In addition, many state departments of education, as in Kentucky, have made professional development systems a linchpin of their instructional improvement efforts, including leveraging PD to help teachers implement new Common Core content standards (see Berry, Daughtrey, Darling-Hammond, & Cook, 2012; Borko, Elliott, & Uchiyama, 2002). One

⁶ See <http://www.help.senate.gov/imo/media/doc/Weingarten.pdf>.

indicator of the enormous faith placed in the potential of PD to drive instructional improvement is the consistently high level of district and school spending on teacher development. The organization TNTP (2015) studied three large urban districts and estimated that they spent on average \$18,000 per teacher per year to improve instructional practice, between 4 and 15 times the cost per employee in other comparable industries.

And yet, despite proclamations of PD's importance and deep investments of time and money, the return on investment remains disappointingly low. TNTP (2015) lamented that even this massive investment in PD had little apparent impact on teaching quality, as measured by multiple modes of teacher evaluation. Teachers have long been similarly dismayed by PD's failure to realize its potential (e.g., Calvert, 2016; Smylie, 1989). Speaking to pre-service teachers in 2012, Secretary of Education Arne Duncan pegged the full cost of professional development at \$2.5 billion each year and then noted, with a blend of sympathy and resolve, "When I say that to teachers they usually laugh or cry. They are not feeling it."⁷ One teacher interviewed by Johnson (1990) speculated about why so much of the school-based PD she received seemed to miss the mark: "They're operating at a very, very general level, and so they have to bring in the presenters who are going to hit on the least common denominator. Usually what happens is very, very unsatisfying... The more general it is, the more useless it really is" (p. 256).

As noted above, much of PD research and practice over the last few decades has focused on developing and applying empirically based and generalizable design principles. Typical among these efforts, Garet et al. (2001) undertook what has become one of the most widely cited studies aimed at improving teacher practice and student learning through PD⁸,

⁷ See <http://neatoday.org/2012/07/10/how-should-we-support-new-teachers-arne-duncan-hears-from-nea-student-members/>.

⁸ According to Google Scholar, as of this writing in September 2016, the article had 3,915 citations.

deriving six “best practice” features from research literature (reform structure, extended duration, collective participation, content focus, active learning, and coherence) and then validating them through a nationally representative survey of math and science teachers attending federally-funded PD programs. The authors concluded, “if we are serious about using professional development as a mechanism to improve teaching, we need to invest in activities that have the characteristics that research shows foster improvements in teaching” (Garet et al., 2001, p. 937). Unfortunately, thus far, evaluations of PD programs developed to better align with these characteristics have been discouraging, showing small to null effects (e.g., Garet et al., 2008, 2011; see Hill, Beisiegel, & Jacob, 2013, p. 478 for additional examples). While it is difficult to pinpoint with confidence a consensus explanation for these disappointing results, post-hoc reflections have suggested poor or misaligned content, inconsistent implementation, ill-suited research design, and quick-shifting policy demands placed on districts, schools, and teachers.

Encouragingly, there is some indication that teachers’ voices and perspectives are being considered in the study and design of PD. For example, much of the recent professional development research literature has urged PD providers and policymakers to be more sensitive to context and to design PD that is school-based and participant-driven (e.g., Borko, 2004; Ingvarson et al., 2005; OECD, 1998; Webster-Wright, 2009). Hochberg and Desimone (2010), extending Garet et al.’s (2001) framework, advised that PD designers and policymakers consider several contextual factors, notably adding that “it is incumbent on professional development experiences to be considerate of teachers’ backgrounds and existing knowledge and beliefs” (p. 100). In addition, more and more practitioners have been outspoken in urging policymakers to integrate teachers’ varied perspectives and experience when it comes to professional development (Berry, 2014; Calvert, 2016; Gates Foundation,

2014). Integrating teachers' perspectives into the design and implementation of professional development is surely important for overall PD effectiveness, but it is also important to bear in mind that professional learning – like all learning – is experienced and interpreted at the level of the individual.

Learner Engagement and Self-Determination Theory (SDT)

Individuals are born with a powerful evolutionary motivation to learn, evident in some of their earliest attempts to make sense of the world (Piaget, 1952). Knowles (1980) contended that self-directed learning was similarly characteristic of adult learning.⁹ Deci and Ryan (1985, 2000) identified three innate psychological needs that were innate and thus motivated human behavior across the lifespan: autonomy, competence, and relatedness. They further observed that satisfaction of these basic needs was interdependent and mutually reinforcing, noting that “correlations among satisfaction of the three needs, at the global or general level, across situations is relatively and expectably high” (Deci & Ryan, 2014, p. 55). Moreover, one’s motivation to satisfy these needs could be distinguished by the reasons underlying one’s actions. *Intrinsic motivation* referred to behaviors done out of interest or enjoyment, and *extrinsic motivation* referred to behaviors undertaken for reasons other than the activity itself (Ryan & Deci, 2000).

Although distinct, the basic needs of autonomy, competence, and relatedness were, in fact, closely integrated in the ways that they promote or thwart motivation. Autonomy

⁹ The set of assumptions underlying adult learning, which included self-directed learning and which Knowles termed “andragogy,” continue to be seen as promising by many adult educators (cf. St. Clair, 2002). At the same time, andragogy has long been critiqued on a number of fronts, including questions about whether it represented a model of teaching or a model of learning, whether adult learning was truly distinguishable from child learning, and whether it was an original theory or merely good practice (Hartree, 1984; Merriam, Caffarella, & Baumgartner, 2006). In addition, unlike Piaget and SDT, it lacks empirical validation (Rachal, 2002). For these reasons, I elected privilege SDT over andragogy in my analysis, even as I acknowledge andragogy’s influence on the domain of adult learning.

appeared to be especially central in this regard in that behaviors aimed at fulfilling one's need for autonomy – such as providing choice or encouraging self-initiation – often contributed to fulfilling the other needs, as well. Deci and Ryan (2013) explained, “when people support someone's autonomy they typically also support that person's relatedness and competence, for example by providing warmth and acknowledging effective performance” (pp. 33-34; see also Ryan & Deci, 2013). Related to education, there has been ample evidence that autonomy-supportive behaviors were associated with student motivation and perceived competence (e.g., Deci et al., 1991; Reeve, 2006; Ryan & Grolnick, 1986; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). In contrast, the presence of external rewards or pressures or punishments, each of which people experienced as attempts to control behaviors and thus inhibit autonomy, were found to thwart intrinsic motivation (see Deci, Koestner, & Ryan, 1999).

Relatedness has, at times, been seen as less central to intrinsic motivation than autonomy and competence, but it remains essential for conceptualizing engagement. This is because, as Deci and Ryan (1991) observed, “[e]nhancing one's self involves assimilating one's world (especially the social world)” (p. 239). Ryan and Powelson (1991) defined relatedness as “the experience of connecting with others in ways that conduce toward well-being and self-cohesion in all individuals involved” (p. 53). Noting that many intrinsically motivated activities happen in solitude, Deci and Ryan (2000) nevertheless noted that “a secure relational base appears to provide a needed backdrop—a distal support—for intrinsic motivation” (p. 235). In addition, they concluded that relatedness was integral for the process of *internalizing* extrinsic motivation. According to Ryan and Deci (2000), extrinsic motivation, long thought to be a relatively invariant contrast to intrinsic motivation, could better be understood along a spectrum defined by the degree to which behaviors were

regulated internally or externally. At one end of this spectrum were fully *externally regulated* behaviors, undertaken to be in compliance with external demands, generally experienced as controlling, and classically understood as the contrast to intrinsic motivation. At the other end of this spectrum were *integrated* behaviors, actions prompted by external forces but which had become fully assimilated and made coherent with one's values. Thus, even though attempts to induce or coerce behavior could negatively affect intrinsic motivation, the presence of supportive peers and a high degree of relatedness could, over time, help one assimilate these behaviors into one's value system and identity. Indeed, among teachers, strong professional communities have been understood as essential for facilitating effective implementation of school improvement reforms, many of which begin as externally regulated but can become more integrated over time (e.g., Elmore, 2004; Rosenholtz, 1989).

Within discrete learning experiences, there are many effective strategies for promoting autonomy, competence, and relatedness. Synthesizing self-determination theory (SDT) with related theories of motivation and engagement, Turner and colleagues (2014) selected four motivation constructs as the basis for interventions aimed to boost learner engagement – the three “basic needs” identified by SDT as well as *meaningfulness* – and identified related instructional strategies for each construct. (See **Table 2.1** for a summary.) Feelings of competence could be facilitated by strategies such as appropriately demanding tasks, scaffolding, or formative feedback (Bransford et al., 2000; Hattie & Yates, 2014). As noted above, providing choices and using non-controlling language could encourage autonomy. Similarly, open classroom climates and room for debate promote autonomous thinking and action (Hess, 2009). Opportunities for group work and cooperative learning have been associated with more positive peer relationships as well as numerous other beneficial outcomes (Martin & Dowson, 2009; Roseth, Johnson, & Johnson, 2008). Finally,

Table 2.1. Empirically derived instructional strategies related to motivational constructs.

Construct	Related Instructional Strategies	Empirical Support
Autonomy	<ul style="list-style-type: none">• Providing choices• Encouraging self-initiation• Using “non-controlling language”• Using tools for self-evaluation• Offering explanatory rationales	Hess, 2009; Reeve, 2006; Ryan & Deci, 2013; Ryan & Grolnick, 1986; Vansteenkiste et al., 2004;
Competence	<ul style="list-style-type: none">• Selecting appropriately challenging tasks• Scaffolding complex tasks• Asking open-ended questions• Using formative assessment	Bransford et al., 2000; Hattie & Yates, 2014; Ryan & Deci, 2013; Turner et al., 2014
Relatedness	<ul style="list-style-type: none">• Modeling mutual respect• Creating opportunities for group work• Leveraging shared interests between teachers and students• Mentoring relationships	Martin & Downson, 2009; Roseth, Johnson, & Johnson, 2008; Ryan & Deci, 2000; Turner et al., 2014
Meaningfulness	<ul style="list-style-type: none">• Demonstrating connections between content and learner interests• Connecting to prior knowledge• Engaging in substantive and open-ended inquiry	Assor et al., 2002; Bransford et al., 2000; Newmann et al., 1996; Turner et al., 2014

Turner et al. (2014) noted that meaningfulness was also important for helping learners to experience authentic learning and to see connections between the learning content and their identities.¹⁰ Activities that promote meaningfulness included making connections to learners’ existing goals and prior knowledge (Assor et al., 2002; Bransford et al., 2000) and substantive conversation-based inquiries (Newmann, Marks, & Gamoran, 1996).

To study teachers’ perceptions and sense-making about these and similar strategies in professional learning, I asked teachers to self-select one of their most powerful professional learning experiences. Many previous studies have studied teachers’ sense-making within PD programs selected for their alignment with desirable design elements (e.g., Grossman et al., 2001; Harnett, 2012; Vaandering, 2014; Wells, 2014). I contend that these studies remain valuable for their thick descriptions of learning in action; but insofar as the focal learning

¹⁰ I discuss alignment between learning content and identity at length in Chapter III.

experiences under study were determined by the researchers and not the teachers themselves they remained tethered to a dominant discourse in which PD was *done to* teachers rather than something teachers engaged in as competent self-authorizing professionals (Webster-Wright, 2009). By asking teachers to self-select professional learning experiences for analysis, I believed I would be more likely to hear experiences that were intrinsically motivating (or extrinsically motivated experiences that over time became *integrated* into their sense of who they were as teachers). Moreover, by letting teachers choose PD experiences that were meaningful I sought to demonstrate respect for their perspectives and judgment.

Specifically, in this study, I aimed to answer the following research questions:

1. How do teachers describe engagement in powerful professional learning?
2. How closely does what they describe as powerful connect to the basic needs of autonomy, competence, and relatedness?
3. What are the implications of teachers' perceptions of engagement in powerful professional learning for PD design and research?

Methods

The present study is a phenomenological inquiry, defined by Creswell (2013) as one that “describes the common meaning for several individuals of their *lived experiences* of a concept or phenomenon” (p. 76; emphasis in original). To analyze perceptions of professional development, I conducted interviews with 25 teachers across five urban school districts in which they reflected in-depth on a powerful learning experience (PLE) and what set these experiences apart from other learning experiences. Given that the impact of any learning experience is often only evident with the benefit of time and the application of new

ideas to practice, post-hoc interviews enabled participants to consider possible connections between professional learning and professional practice.

I contend that Self-Determination Theory (SDT) is an appropriate analytical lens to explore teacher engagement for several reasons. First, SDT's three essential elements of autonomy, competence, and relatedness reflected well patterns I was seeing emically in my data and helped me make sense of them. Moreover, themes of autonomy, competence, and relatedness recur throughout contemporary policy debates about teacher professionalism and development and thus they may be relevant for better understanding and engaging these debates. Second, SDT's emphasis on individual motivation is appropriate given the highly individualized nature of teachers' learning experiences. Indeed, SDT has been widely applied to education and has been used to better understand the processes of teaching and learning (e.g., Deci et al., 1991; Gorozidis & Papaioannou, 2014; Klassen, Perry, & Frenzel, 2012). Finally, among psychological theories of motivation, SDT integrates and has catalyzed a broad range of complementary research and has been thoroughly vetted and empirically validated.

Participant Recruitment

Employing a purposeful stratified sampling strategy (Patton, 2002), I recruited teachers from five adjoining school districts in the northeastern United States. The districts varied by resource levels, student demographics, and student achievement, and the teachers within my sample varied according to grade level taught and years of experience. I limited recruitment to currently practicing educators in non-charter public schools who had been teaching for a minimum of three years. I sought to recruit a sample stratified according to

grade level taught (primary and secondary) and years of experience (between 3-5 years and 6 or more years).¹¹

Bearing these restrictions in mind, I enlisted colleagues with the ability to reach out to large numbers of teachers — for example, district administrators or union leaders — to send an email invitation on my behalf, thus enhancing my ability to recruit a sample more representative of the teaching population as a whole than if I had relied solely on personal and professional “word of mouth” recruitment. Such broad recruitment proved initially effective, but did not result in a desirable sample size. I then leveraged professional contacts with connections to specific school leaders or teachers within the target districts. I began recruiting participants in July 2014 and ended recruitment in October 2015, although most recruitment happened during the first two months of the 2014-2015 and 2015-2016 school years, a time when teachers were neither under pressure associated with the ends of marking periods or high-stakes tests nor on vacation.

Sample

As noted above, my final sample consisted of 25 teachers in five districts in the northeastern United States.¹² There were more women than men (20 and 5, respectively), more elementary and middle school teachers than high school teachers (also 20 and 5, respectively), and more experienced teachers (6 or more years) than novice teachers (19 and 6, respectively). I did not ask teachers to self-identify their race or ethnicity. With the exception of grade level — which nationally is evenly split between K-8 and high school teachers — trends in my sample reflected national trends, in which 76.3 of the public school

¹¹ I justified the cut-off between newer and more experienced teachers based on a report estimating that close to half of new teachers leave the profession within 5 years, marking the completion of five years as an important milestone in the lifespan of a teacher’s career (Alliance for Excellent Education, 2014).

¹² The names of all teachers in this paper are pseudonyms.

teaching force is women and more than 60 percent have been teaching over 10 years (National Center for Education Statistics, 2014). All of the districts except one had proportions of economically disadvantaged students that exceeded the statewide average. See **Appendix A** for a summary of district demographics and teacher characteristics within my sample.¹³

Data Collection

I used a modified form of in-depth interviewing as a way for participants to “reconstruct and reflect” on powerful professional learning experiences (Seidman, 2006). Following Webster-Wright’s (2010) process with therapists, I asked teachers to reconstruct and reflect on professional learning experiences they found especially meaningful. Focusing on a single experience with each participant allowed me to account for the unique context in which learning occurred. To this end, I also asked participants to provide background on their core beliefs about teaching and improvement as well as brief comparison cases by describing a professional learning experience that they “would like never to have again.” For the full protocol, see **Appendix B**. Semi-structured interviews lasted between 45 and 90 minutes. In addition to transcribing interviews in full, I drafted context memos immediately following each interview in which I recorded my observations of where the interview took place and the participant’s demeanor, reflected on my own role in our conversation and how I may have influenced the story, and considered how their story resonated with or challenged accounts from other participants. These memos served as important additional data sources.

¹³ Tables and methodological supplements applicable to each of the three papers in this thesis are included in the appendices. All other tables and figures are embedded in the text.

Data Analytic Strategy

Conducting multiple rounds of descriptive coding (Saldaña, 2013), I listened both within and across participants' accounts for emerging patterns in how they made sense of their professional learning experiences. Parallel to coding, I drafted thematic memos to explore these patterns in more depth, making connections to empirical literature and across accounts. Observing that several of these thematic memos were consistent with features of SDT and engagement research – for example, memos on autonomy and the “relational dimension” of learning – I re-analyzed transcripts specifically with SDT-derived codes to explore connections and interactions across transcripts. In so doing, I paid particular attention to teachers' motivational imperatives for learning and evidence of need-satisfying pedagogical strategies or learner behaviors, discussed above.

In the pages that follow, in order to better interpret the ways that powerful professional learning may have contributed to fulfilling teachers' basic needs, I first review each of the basic needs and consider the extent to which teacher accounts demonstrated need satisfaction. In addition, recognizing that these needs were closely linked, even interdependent, I then present an in-depth case study of one teachers' powerful learning experience that illustrates the ways these needs interact within and across learning experiences as well as the way need satisfaction – specifically, need satisfaction of relatedness – may over time integrate extrinsic motivation.

Limitations

I acknowledge potential limitations of this study. First, my data is cross-sectional and thus unable to fully account for how teacher motivation and engagement might evolve over time. Related to this, the retrospective self-reported nature of the data – while essential for

answering the questions specific to this study – also had limitations. In particular, teachers’ accounts of earlier learning experiences were necessarily reconstructed according to their current beliefs and perspectives and not the ones they may have had at the time. In addition, these self-reports may have been colored by participants’ biases or blurred by the haze of memory. Ethnographic research tracing teachers’ experiences of professional learning over time and using a combination of observation and reflective interviews could help minimize these biases. Relatedly, as someone who has both facilitated and participated in teacher professional development myself, I acknowledge that I came to this study colored by my own experiences and biases (Peshkin, 1988). To help mitigate researcher subjectivity bias, I took steps to reflect on and then “bracket” my personal experiences and beliefs when collecting data (Creswell, 2013). Similarly, I offered “member checks” to participants, allowing them to view copies of their transcripts and clarify their stories if they felt they had not adequately represented their own experiences (Creswell, 2013). Those who did examine their transcripts made no changes. Finally, my sample size was large enough to capture some variation while also suggesting some clear patterns, even though it remained very small relative to population of teachers who experience professional learning.

Findings and Discussion

Before presenting my analysis and case study, I briefly review conceptual definitions for the three basic needs. Deci and Ryan (2000) defined *autonomy* as “volition—the organismic desire to self-organize experience and behavior and to have activity be concordant with one’s integrated sense of self” (p. 231). Equating *competence* with efficacy, Deci and Ryan (2000) hypothesized that people needed to feel both a sense of accomplishment – often revealed through positive feedback – and a sense of ownership for

their accomplishments in order to satisfy the need for competence. Finally, *relatedness* in SDT – connecting with others in ways that enhanced the wellbeing of everyone (Ryan & Powelson, 1991) – was analogous to many teachers’ experiences of reciprocity in powerful professional learning.

Autonomy

Of the three basic needs identified by Deci and Ryan, autonomy was perhaps the most basic insofar as its fulfillment facilitated the fulfillment of both competence and relatedness. Indeed, Deci and Ryan (2013) observed, “when someone experiences satisfaction of the autonomy need, that person typically feels free to behave in ways that yield satisfaction of the competence and relatedness needs” (p. 34) Defined as a “desire to self-organize experience and behavior” (Deci & Ryan, 2000, p. 231), autonomy took multiple forms throughout teachers’ accounts of powerful professional learning.¹⁴

Among the most fundamental exercises of autonomy, teachers made choices about how they organized their professional learning – opting into or out of experiences, when possible, that best aligned with their learning needs or beliefs. For example, many teachers were intrinsically motivated to undertake PD on their own time and in line with either their values or their intuition about what they needed to improve as a teacher. Laurie, a high school Spanish teacher, noted that her powerful learning experience – a trip to South America with a colleague so that they could research and develop an interdisciplinary unit on the Latin American short story, funded by grant from the Fund For Teachers.¹⁵ It was

¹⁴ Re-conceptualizing autonomy within the situated and sociological framework of agency (Emirbayer & Mische, 1998; Holland, Lachicotte, Skinner, & Cain, 1998), I further elaborate its multiple dimensions as they relate to professional learning in Chapter IV.

¹⁵ According to its website, the Fund For Teachers (FFT) is a national non-profit organization that partners with local education agencies to support teachers’ “personal and professional growth” by funding teacher-designed projects that have “the greatest impact on their practice, the academic lives of their students and on

valuable in part because she felt in control of the experience and felt respected as a professional who could design her “utopian professional development experience.” Looking back on it, she said, “It doesn’t fulfill any requirements for maintaining licensure or anything like that, but in terms of feeling like a professional experience or feeling renewed or kind of expanding... content area knowledge and having an experiential learning experience that maybe you wouldn’t have been able to afford otherwise, you know, it’s pretty remarkable.”

Fran, another FFT grant recipient and experienced elementary teacher at a full-inclusion school, emphasized the instrumental value of her and her co-teachers’ experience redesigning their science curriculum on animal adaptations, in part using materials gathered during an FFT-funded African safari: “We knew the curriculum, and so we designed something that we knew were weak in, that we wanted to enhance.” Similarly Jill, a 30-year veteran middle school humanities teacher who participated in a two-year initiative to integrate dramatic techniques into the classroom called the Middle School Drama Collaborative, talked of knowing what she wanted to learn and valuing the opportunity to pursue it. She explained, “It’s what I wanted. I’m like, ‘This will be good for me,’ like this is something I want to bring into my classroom.” Indeed, Jill reported that the skills and competencies acquired from this training “had a lasting effect” on her teaching. In addition to incorporating dramatic techniques into her lessons, she said that she came away from the experience with a new “understanding of why I was doing that and what kids get out of it and recognizing it engaged a different group of kids.” In other words, not only did Jill’s teaching change but her perspective on her teaching changed, as well.

their school communities” Since 2001, FFT has funded over 6,000 projects totaling over \$22 million. FFT’s 2016 class of fellows comprised 483 teachers from 32 states plus the District of Columbia (see <http://www.fundforteachers.org/documents/2016-Fellow-Compilation.pdf>).

Opting into professional learning experiences was not the only form of autonomy seen as valuable to teachers in this study. Teachers also exercised their autonomy or discretion through co-planning or open-ended inquiry. As part of Jill's experience with the Middle School Drama Collaborative, a small group of teachers met approximately once a month with a group of professional actors to learn activities for incorporating drama into their instruction. Between sessions, teachers signed up for a time when one of the actors would come to their classroom to co-teach with them. Importantly, Jill said, it was up to the teachers to decide which strategies they wanted to try during these lessons and when to schedule the visits. It was a form of autonomy that she viewed as a demonstration of respect. "They were mandating that we do something that was applying something we had just learned," she said, "but they were giving us the flexibility and leeway to do with it as we would."

In addition, this exercise of autonomy could also take the form of teachers stepping back from the group. During a multi-year collaborative inquiry into fundamental math concepts, Ellen recalled how freeing it felt for participants to set their own pace and to be able to walk away from the work when it would help them collaborate more effectively. The program – a cohort-based project called Mathematics for Tomorrow (see Nelson & Hammerman, 1996) – was "really built on collaborating," she said, but at the same time, "you could choose to, if you wanted, say, 'Hey I need to, just give me fifteen minutes with, I got to figure this out myself.' And that was part of it.... communicating to people, 'This is my, you know, I need to do this.'" She saw this type of autonomy as a form of "taking care of yourself" as a learner. Another form of asserting one's learning needs during PD was an attempt by Wayne, a 25-year veteran high school English teacher at a program for students with high emotional needs, to sharpen the focus of an afterschool workshop about writing

conferences.¹⁶ A former divinity school student who came to teaching by “happenstance,” Wayne struggled early in his career to teach writing: “I basically tried to say, ‘This is how you do it,’ and then we’ll put it up on the board and I’ll come and correct. But I think that was my deficiency...It was so overwhelming,” he said. And so when Carl Anderson¹⁷, a consultant from the Reading and Writing Project at Teachers College, came to give a three-hour workshop at his school about how to confer with struggling writers Wayne recognized Anderson’s expertise as something that could help him address his own shortcomings. The bulk of the presentation, Wayne recalled, was Anderson giving examples of how he conferred with students and showing transparencies of student work on an overhead projector. But the relevance of the student work was also in part thanks to Wayne’s outspokenness: “I’d be like, ‘Well, hey, wait a sec, but what about...?’, and he’d pull out another piece of paper, another transparency, to talk about that.” More important, Wayne added, “The work he pulled out reflected some of the challenges of my students rather than generic high school kids ...[and] the fact that he was able to adapt to pulling out texts of such struggling writers, I think, almost made me feel like he was talking to my students, what I face on a daily basis. And I think that’s what made it, you know, feel more transformative.” Anderson’s ability to adapt to Wayne’s needs was essential to making the learning experience “transformative,” but these adaptations might not have happened were it not for Wayne’s willingness to ask for what he needed.

¹⁶ I explore Wayne’s case – specifically, how his experience was related to his professional identity – in more detail in Chapter III.

¹⁷ Throughout this thesis, given the complimentary nature of teachers’ accounts powerful learning, I elected to not use pseudonyms for presenters unless it would compromise the identity of the teacher who shared the account. As of this writing, Carl Anderson was still a staff developer with Lucy Calkins’ Reading and Writing Project at Teachers College. See <http://readingandwritingproject.org/about/people/staff-developers> (accessed February 22, 2016).

To varying degrees each of these examples also led to autonomy-supportive behavior that extended beyond the PD and resulted in changes to teachers' practice. In particular, Laurie and Fran, each of whom designed their own professional learning experiences through the Fund For Teachers, used what they learned to make substantive changes to their curriculum – in Laurie's case developing a new interdisciplinary unit and in Fran's case transforming an existing one. Jill and Ellen, too, made meaningful changes to the way they taught, but their changes were less about specific content and more about their beliefs and how these beliefs transformed their pedagogy. Jill described the effect of her years working with the Middle School Drama Collaborative as “profound,” having recognized the capacity of dramatic techniques to engage a wider range of learners and integrating a range of dramatic techniques to help students process things they were reading. Ellen, having been exposed to constructivist teaching during her MFT experience, remembered committing herself to “less telling” in her teaching and a more “explorative-based, inquiry-based practice.” Wayne experienced changes in both his curriculum and his beliefs, but notably he also emerged from his learning experience with a wide-ranging leadership role in his district. Like Ellen, who credited MFT with her decision to shift from teaching general education elementary school to becoming a math specialist, Wayne felt catalyzed by his afternoon training with Carl Anderson. After the workshop, he said he was “on fire” for Writers Workshop: “It made all the difference of getting me pumped, just pumped my tires and then you wanna ride,” he said. He went on to attend numerous Writers Workshop trainings at Teachers College. He joined a district-wide coordinating committee for the implementation of the program. He became a trainer and coach for other teachers in his district. And according to Wayne, these choices to undertake additional responsibilities emerged directly from his powerful professional learning experience.

According to SDT, two types of actions can be considered autonomous: intrinsically motivated behaviors and extrinsically motivated behaviors that become fully integrated (Deci & Ryan, 1991). Systems of external regulation, such as those relying on rewards and punishment to induce desirable behavior and often observed underlying teachers' most *negative* learning experiences in this sample, are anathema to intrinsic motivation and autonomy. For example, four teachers independently shared accounts of similar learning experiences: state-mandated trainings on teaching English language learners. Other externally regulated experiences included pre-service college coursework, district-mandated orientations for new teachers, and school-based PD on topics ranging from cyberbullying, project-based learning. In the case of Wayne, however, his involvement with Writers Workshop began as a form of compliance – a required afterschool workshop – but over time it may be seen as somewhat autonomous to the extent that the requirement aligned with his own values about what was essential and valuable knowledge. What had been required of him became what he wanted. Wayne's subsequent endorsement of Writers Workshop – as evidenced by his participation as a trainer who led other required workshops, for example – was evidence of a teacher engaging in externally regulated behavior not for compliance but “as a source of spontaneous enjoyment or satisfaction” (Deci & Ryan, 2000, p. 236).

Competence

Perhaps curiously, a confirmed demonstration of one's competence seems to be less important for intrinsic motivation than one's *perception* of competence. White (1959) theorized that people were motivated primarily by “the *feeling of efficacy*, not for the vitally important learnings that come as its consequence” (p. 323; emphasis added). Similarly,

Bandura (1997), described perceived self-efficacy as “not a measure of the skills one has but a belief about what one can do under different sets of conditions with whatever skills one possesses” (p. 37).¹⁸ This sense of efficacy, wrote Deci and Moller (2005), “provides ‘the reward’ for behaviors that are energized” by one’s drive for competence (p. 581). Relatedly, Deci and Ryan (2000) pointed out that a feeling of competence was often aroused by positive feedback from a trusted source.

Among the teachers interviewed for this study, feedback from credible authorities was commonly cited as a feature of powerful professional learning. Chelsea had over 15 years experience teaching in K-8, both general education and inclusion, and was just starting her second year as an “inclusion coach” when we spoke. The position was new to her district, and so while there was still some open-endedness to her role it primarily involved collaborating with teachers to support struggling readers. As such, Chelsea recognized that she would need to build her competence working with adults as well as with children. To acquire the skills she needed, she attended a series of trainings led by Gene Thompson-Grove, a former teacher and district administrator.¹⁹ Thompson-Grove was well known and effusively respected by many teachers, including two in this study. Chelsea called her “an amazing person,” adding, “Every time she gives a PD, I’m running and paying whatever top dollar to go to.” The other teacher, a first-grade teacher named Bonnie who had both taken and co-facilitated a workshop about Critical Friends Groups with Thompson-Grove, also called her “amazing.” In the workshops Chelsea described, Thompson-Grove worked to

¹⁸ Notably, Bandura (1982, 2001) demonstrated that efficacy beliefs were also associated with improved task performance, suggesting that self-efficacy may in fact be associated with more than just the perception of competence. In this vein, Caprara et al. (2006) demonstrated that teachers’ self-efficacy beliefs had a positive effect on student achievement.

¹⁹ Thompson-Grove was also a founding Board member of the School Reform Initiative (SRI) and currently a consultant. In addition to the weeklong “Facilitative Leadership” training Chelsea also attended a 6-hour training called “Designing Adult Learning” with Thompson-Grove. Descriptions can be found here: <http://www.schoolreforminitiative.org/wp-content/uploads/2015/12/Transformational-Learning-for-Equity-and-Excellence.pdf> (accessed September 26, 2016).

create a learning environment conducive to trust and risk-taking. Making prodigious use of “protocols” – structured activities designed to promote focused discussion and reflection, many of which Thompson-Grove herself had written – the trainings had participants practice presenting and responding to dilemmas as she provided real-time feedback. Chelsea recalled one activity when Thompson-Grove had a participant deliberately “break the protocol” – for example, talk longer than they were allotted or veer off topic – just so that the person facilitating could practice how to respond. “Much like a coach,” Chelsea said, “Gene would chime in and say, ‘Right now, you’re going to tell that person that they need to follow the protocol,’” providing them model language and feedback. In addition to modeling facilitation, Thompson-Grove modeled vulnerability and candor, taking turns sharing stories from her own work. These moments helped someone like Chelsea to feel comfortable “taking a risk” and volunteering to present a dilemma to her peers, most of whom she did not know. The experience was deeply transformative for Chelsea, largely the result of the feedback she received from her peers and from Thompson-Grove. “After the fact, a lot of the participants [gave] me their own personal feedback, ‘Wow, thank you for taking that risk. It makes me realize that I’m not alone...’ It was really powerful.” Looking back, she added, “I was getting the feedback I needed, to know places I needed to grow as well as places I was on the right track.”

In the case of Ellen, a teacher for over 20 years and first introduced above, the formative feedback she received regarding her understanding of fundamental math concepts was less influential than *the way* it was delivered. The constructivist pedagogy she saw modeled with MFT helped her take risks and engage in deep and authentic learning herself. This process led her to see herself as capable of a new kind of teaching and it changed her career. The two-year program – which consisted of two-weeks in the summers followed by

biweekly meetings during the school years – was rooted in what Ellen called an “exploratory approach” to math through which teachers worked in groups to interrogate fundamental math concepts, analyze student thinking, and reflect on their practice (for a more in-depth description, see Nelson & Hammerman, 1996). About the facilitators, Ellen cited the “well thought-out, well planned” activities as evidence of *their* competence, but this assessment was complemented by a perceived kinship between the teachers and facilitators rooted in their shared experience: “There was a lot of respect for them, you know, among us teachers. They had credibility, because they were, I think, very effective facilitators. ... They both had been teachers. And because we respected them, we were open to learning as well.” Truly constructivist teaching is often hard to analyze because it involves teachers who talk less and listen more. As a noted constructivist teacher put it, “Instead of explaining to the students, I ask them to explain what they think and why... Much of the learning is in the explaining” (Duckworth, 1987, p. 130). But this restraint, punctuated with well-timed and open-ended questions, is at the heart of what Ellen found so valuable. In particular, Ellen recalled an activity called “Starfish Math,” in which the facilitators set up a simulation and then set about “working the floor,” circulating among groups, asking teachers to share their thinking, and posing open-ended questions.²⁰ Of one of the facilitators, Ellen noted that she “asked a lot of questions, and she would sit down with you. She was very patient, I think, with people who weren’t necessarily understanding.” Ellen identified herself as someone who struggled to understand the concepts and ideas being discussed: “like children, I mean there were people in the room who were, getting things like this” she said, snapping her fingers, “and

²⁰ As Nelson and Hammerman (1996) explained, Starfish Math was adapted from a simulation called “X-Mania,” developed by Martin Simon and still used at the summer PD institutes run by the Math Leadership Programs (formerly SummerMath for Teachers) at Mt. Holyoke College. One version of the simulation can be found at http://www.austincc.edu/hannigan/Math1523/Unit4_Xmania/IntrotoXmania.pdf. For a description of teachers undergoing the simulation, see Chapter 3 in Schifter and Fosnot (1993).

I'd be like, 'Oh, jeez.'" But the careful modeling of the facilitators and other teachers, as well as scaffolded opportunities for continued learning throughout the experience, helped Ellen's tentativeness turn to excitement and a sense that what she was learning was "really going to make a difference for me in my practice." Based in part on this belief, Ellen transformed her teaching. "I started implementing the strategies and techniques," she said, "moving to an explorative-based, inquiry-based practice. I started less telling. I became more of a facilitator in my own classroom." In addition, she continued her involvement with MFT as a facilitator, which set her on a path to be a middle school math specialist and coach where she tried to be the kind of facilitator she found so valuable as a learner. "I don't tell. I do very little telling. ...If I'm really struggling and not quite figuring out what the teacher wants or is asking me, I'll have to say, you know, 'Do you want me to just tell you this?' Because my approach is I'll ask some guiding questions, and the teacher will arrive at what's right for her or whatever."

Like Ellen at the time of her involvement with MFT, Maria was a novice teacher when she participated in a one-day workshop about an instructional approach for teaching music to young children, required as part of her initial teacher education program. Developed by Dr. John Feierabend²¹, a professor and director of the music education program at the University of Hartford, the teaching method was called "First Steps in Music" (see Feierabend, 2000, 2006). Feierabend himself led the workshop, which Maria called "the basis of my curriculum" and "the most impactful training I've ever attended." Presenting in a college auditorium, with the group of 50-60 teachers and student teachers sitting together on an orchestra stage, Feierabend used a mix of "video demonstrations,

²¹ As of this writing, Dr. Feierabend (pronounced FIRE-robin, according to Maria) was still teaching at the Hartt School at the University of Hartford. See <http://harttweb.hartford.edu/faculty/musiced/jfeierabend.aspx> (accessed April 5, 2016).

slideshows, a lot of singing.” Maria fondly remembered his use of modeling both to illustrate his philosophy and demonstrate desired teaching techniques. The strategies introduced in the workshop were very precise, and according to Maria they were not universally accepted among music teachers, noting that there was “some controversy” about the best methods for teaching music to young children.²² However, she appeared not to perceive the session as overly didactic or prescriptive, describing Feierabend’s relationship to the learners as “very ‘we’re all in this together.’”

As noted by Johnson and Birkeland (2003), the drive for competence among novices is strong and very rational. Without a sense of rudimentary competence, the novice is unlikely to be motivated to take the (often autonomous) risks that learning and improvement requires. As a new teacher, Maria likely needed the structure that Feierabend’s PD provided and that his curriculum seemed to promise. In general, novices lean on a high level of specified support to do things that become more automatic with the accumulation of experience and expertise (Bransford et al., 2000; Hattie & Yates, 2014). Thus, the scaffolding – both philosophical and practical – offered by the Feierabend training to a novice teacher like Maria would have been especially attractive for its clarity and directness. Embracing the strategies and tools in his curriculum – all of which she subsequently bought, Maria said – would have helped to reduce the considerable “cognitive load” borne by early career teachers (Feldon, 2007). Indeed, as connected as Maria felt to Feierabend and his ideas, the most important aspect of her PLE seemed to be the increased sense of competence and feeling of efficacy that resulted from her first exposure to his method (cf. White, 1959). Having a concrete set of tools and having experienced a subsequent “sense of success”

²² Indicative of this debate, one study comparing music education methods – including Feierabend’s – found that “pedagogical ideology” was not a good predictor of children’s musical performance (Gault, 2002, p. 61).

(Johnson & Birkeland, 2003), Maria had a clarity and a confidence that defined her early years as a teacher. When asked what she learned from the workshop, she was procedural and direct: “Just the exact method I use for teaching a new song was taken from this workshop,” she said. The methods from Feierabend – compellingly demonstrated and justified using explanatory rationales (Reeve, 2006) – seemed to give Maria a new and durable conception of music education to contrast with her own music training. Beyond the concrete skills, though, Maria was also being inducted into a way of thinking and a community of practitioners, the size and enthusiasm of which provided valuable feedback to her that this method was worth learning. She was a “Feierabend teacher.” And even though she never attended another training, adopting such a professional identity – even implicitly – aligned Maria squarely with the beliefs of a sizable community of other teachers, exemplified by the teacher-initiated and -run Feierabend Association for Music Education (FAME).²³ A sense of trust and belonging – what Deci and Ryan (2014) called feeling “personally accepted by and significant to” another person or community (p. 53) – would appear to be a necessary antecedent for constructive feedback to take root. Indeed, Raudenbush and colleagues (1992) found that teachers tended to have higher levels of self-efficacy when working in highly collaborative environments.

Relatedness

According to SDT, the satisfaction of one’s innate need for relatedness – the feeling of being “personally accepted by and significant to others, and to feel cared for by others and caring of them” (Deci & Ryan, 2014, p. 53) – is an essential element of one’s personal wellbeing. Strong social ties are important for satisfying this need, but Deci and Ryan (2014)

²³ For more, see <https://www.feierabendmusic.org/about/> (accessed September 19, 2016).

caution that “not all social interactions yield a true sense of relatedness” (p. 53). In line with the interdependence of the three basic needs in SDT, relationships that contribute to satisfaction of the need for relatedness also tended to be ones in which individuals experience satisfaction of the needs for competence and autonomy. For many teachers in this study, such relationships resembled mentoring relationships. Indeed, mentoring – whether as part of a formal induction program (Feiman-Nemser, 2001), a formal “peer assistance and review” model (Goldstein, 2006), or less formal peer-to-peer interactions (Papay, Taylor, Tyler, & Laski, 2016) – was seen as an essential (and relational) conduit for continuous teacher learning and improvement.

In this sample, several teachers spoke of professional relationships that appeared both to satisfy their need for relatedness and to contribute to the improvement of their practice. David, a middle school English teacher, was already disposed toward relationally-driven teaching and learning, having researched teacher preparation programs as an undergraduate and then attended what he described as a “relationship-built” Master’s program at Earlham College.²⁴ He explained, “One of the things that Randy [Wisehart, the director of graduate programs in education]... said was that collegiality is life or death... If you don’t have it, you’re not going to make it as a teacher. You *have to* make connections with other people.” Given this induction climate, it was unsurprising that David came to believe that instructional improvement – including his own – emerged primarily “from the context of a relationship.” As evidence, he seemed to delight in recounting a steady stream of mentors he had early in his career: Alonso, a colleague who taught him about classroom

²⁴ By way of explaining its philosophical and pedagogical approach, Earlham’s Master of Arts in Teaching program cites its “grounding in Quaker practices,” including “cooperative community, the pursuit of an openness to truth, respect for consciences of others and lack of coercion” (see <http://earlham.edu/master-of-arts-in-teaching/awakening-the-teacher-within/>, accessed October 1, 2016).

management as a first-year teacher; Ida, the retired French teacher who helped him navigate district politics and give him career advice; Luz, the teaching aide whose unyielding high expectations for their students served a model for him; and Craig, a teacher to whom he still turned as a trusted sounding board. Each of these relationships, to varying degrees, incorporated essential feedback on David's teaching practice and helped him see himself as gradually more competent and able to work independently. Connected though each of the three basic needs may have been, though, effective professional development for David began with its roots in relationships. "You can have a very organized [PD] program," he explained, adding that "it doesn't mean anything until you have a connection between people, between -- in the context of a relationship." At first, then, David's powerful learning experience seemed incongruous with this conviction: a summer institute offered by Advancement Via Individual Determination (AVID), a highly structured college readiness program offering a curriculum and instructional strategies focused on organizational and study skills.²⁵ But rather than interpreting his experience instrumentally – that is, narrowly tailored to improve specific teaching competencies – David viewed it primarily as a relationship-driven encounter. Indeed, he called it "a very socially charged atmosphere." What stood out most to him was not the curriculum or the tools he received, but the small group discussions and sharing that accompanied the activities and the relationships he built with a core group of teachers from across the state. David remembered, "We would just talk and talk and that informal part was probably the most meaningful."

Michelle, also an English teacher but of 11th and 12th graders at an international public high school, had a multi-year coaching and mentoring relationship with a former New York City district administrator and consultant named Maryann Cucchiara. Cucchiara, in

²⁵ For more on AVID's secondary school program, see <http://www.avid.org/secondary.ashx> (accessed October 1, 2016).

partnership with linguist Lilly Wong Fillmore, had jointly developed a method for helping students decode and use academic language. Arguing that “the language required for advanced literacy and learning in school is . . . a by-product and *outcome* of working with such materials” (Fillmore, 2014, p. 627; emphasis in original), they developed a method by which teachers carefully selected sentences from real (and interesting) texts using complex language structures and engaged students in an academic discussion parsing the language.

Two years earlier, Michelle was invited as part of a team of teachers at her school to a district-wide workshop with Cucchiara. At the time, she remembered feeling ambivalent about the content. But over time – and with the benefit of repeated exposure to Cucchiara and her ideas through subsequent workshops, school visits, and classroom “walk-throughs” – Michelle began to see the value in what she was learning. The ongoing relationship also became more informal, with Michelle reaching out to Cucchiara directly for advice on her teaching. In this way, their relationship resembled what Glazer and Hannafin called a “collaborative apprenticeship model” in which there is a mentor and a protégé whose teaching and learning depend on a series of “reciprocal interactions” and incremental progress toward mastery. Importantly, Michelle said that the most valuable interactions with Cucchiara were in small groups or just the two of them, where they could look closely together at student work. As Michelle became more proficient with the concepts and techniques she learned from Cucchiara, she also began to identify herself differently as a teacher. Reflecting on her career arc, she observed she went from learning “how to plan” to thinking metacognitively about building a portfolio-based assessment system. “But the last few years,” she said, “have been really helpful for me to think about myself as a *teacher of language* and that’s who I am right now.” In addition, though, she became a mentor in her own right, leading her grade-level team through a self-study of how they taught academic

language. Of her team, Michelle said, “What makes this team really function -- and I lead the team, but it would function this way without me, I think – is that we all really, we learn. We are interested in learning. And we’re interested in getting better. And so, and there’s *zero* competition amongst us. We are like our raw selves. We show the raw work of our kids.” By opening themselves up to each other and supporting each other’s learning, Michelle’s team was modeling “the characteristic mutuality of support and caring” (Deci & Ryan, 2014, p. 63). In the parlance of SDT, Michelle was describing an intrinsic and autonomous motivation to learn and to learn as a group – one that transcended or operated outside the accountability demands placed on her and her colleagues.

In some ways similar to the collaborative apprenticeship Michelle had with Maryann Cucchiara was the relationship of Bonnie, a kindergarten and first grade teacher for seven years, Gene Thompson-Grove, introduced earlier as the facilitator of Chelsea’s powerful learning experience. Five years earlier, Bonnie too attended a weeklong course with Thompson-Grove, hers about how to lead Critical Friends Groups (CFGs) and offered by the School Reform Initiative (SRI).²⁶ Originating from the work of Ted Sizer and the Coalition of Essential Schools in the 1990s, CFGs are “a model of structured reflective practice” through which small groups of teachers use protocols to present dilemmas of practice, discuss student work, and share professional knowledge (Kuh, 2016, p. 294). For Bonnie, the experience was deeply affirming, a time when she said “it felt like the judgment went out the window” and she was able to have the undivided attention of twelve people listening to her talk about her practice and wrestling with her dilemmas. Looking back, Bonnie remembered presenting a dilemma to the group and feeling something resembling

²⁶ Since Bonnie went through her training with SRI, the National School Reform Faculty at the Harmony Education Center trademarked “Critical Friends Group.” The SRI website still refers to articles and resources related to CFGs but includes a legal disclaimer.

equanimity as she gave her dilemma up for group discussion: “I’m not even like part of it, but I just get to listen to people hash it out... I can hear people talk about it in a different way that I wasn’t quite understanding it and now I have a better understanding of why that was kind of -- in School Reform Initiative, we say, ‘keeping you up at night.’” With time, Bonnie came to recognize the work that Thompson-Grove, as the facilitator was doing in that moment to make it so valuable for Bonnie. A lot of the work came early in the week, during an intensive norm-setting process that sought to align with the CFG’s use of protocols to guide the conversations. Bonnie explained, “The facilitator’s job is to make sure everybody -- it’s equal voice -- ...and also making sure that the presenter is getting what they want. So it’s not about, ‘Everybody, it’s time to play fair.’ It’s like, ‘Everybody, we’re here because Bonnie needs us and we’re giving up an hour to talk about this one thing.’ And so you go through a tremendous amount of norms and creating norms as a group so that’s not policing. It’s just sort of like, ‘Great, we all know how we operate now.’” The norms of equal voice and service to the presenter reflect the kind of mutuality and reciprocity inherent in Deci and Ryan’s conception of relatedness.

So valuable was Bonnie’s initial experience with Thompson-Grove and CFGs that she did three things after the workshop was over to help her consolidate what she learned. First, she went on to co-facilitate a number of subsequent courses with Thompson-Grove, working closely alongside her as a co-equal and a source of valuable perspective. Second, with two other early childhood teachers, she co-led a drop-in CFG specifically aimed at the dilemmas and practice of early childhood education. The motivation underlying this drop-in CFG was an epiphanic moment that she came to recognize near the end of most CFG leadership trainings: “There’s ...such amazing collegueship and like just this team or group that is created, and then there’s sort of this but also, ‘I got to go back to my work and I have

to do this with people who might not know the protocols or might not be interested' ...There's certainly this feeling of like, 'Okay, but my job now is in to go try to convince people to do this type of work,' [but] it's like, 'I just want to go do this work.'" Finally, Bonnie started a program of "peer observation" at her own K-8 school, through which teachers could sign up either to observe colleagues or open up their own classrooms for observation and feedback. One of the participating teachers was David, discussed earlier, who remembered feeling at a low point and asking people to observe him and notice things he was doing well, which he reported being "a *huge* confidence boost." No longer working in the same school when I interviewed them for this study, Bonnie and David nevertheless remained close.

An Integrated Case

In the previous sections, I presented evidence of each basic need across a range of professional learning experiences shared by teachers in this sample. However, individuals seldom experienced these three needs in isolation. Indeed, Deci and Ryan (2014) noted that "satisfaction of *each* of these psychological needs is necessary in an ongoing way for people to function optimally and to display a high-level of psychological health" (p. 55; emphasis mine). Moreover, correlations of need satisfaction among the three needs is relatively high, suggestion that satisfaction of one may well facilitate satisfaction of the others (Deci & Ryan, 2015). For this reason, I turn to a case of how autonomy, competence, and relatedness interacted within a single powerful learning experience. Importantly, I also use this case as an illustration of how authentic and intrinsic engagement may emerge from extrinsically driven activities, specifically considering the process by which externally regulated behaviors may become over time fully integrated (Deci & Ryan, 2000; Ryan & Deci, 2000).

When we spoke, Jamie, an early childhood teacher of five years, was about to begin her third year as a Reading Recovery (RR) specialist. In her relatively brief career, Jamie seemed to view professional learning squarely through a relational lens. Rather than citing the accumulation of experience or discrete strategies as key levers for instructional improvement (as was critical for Jill, Wayne, or Maria, for example), Jamie, like David, credited a continuous stream of mentors and coaches with helping her improve as a teacher – a mentor from her student teaching year, an early childhood coach from a year at a school pursuing accreditation from the prestigious National Association for the Education of Young Children (NAEYC), various school-based literacy and math coaches, and most recently her teacher leader from Reading Recovery.

Encouraged by her principal to apply and then accepted into the Reading Recovery training program, Jamie called her experience “probably the best professional development I’ve had.” Once accepted, RR teachers in training meet for a weeklong summer institute, facilitated by a designated “teacher leader,” regarding the theory underlying the program and the logistics of running RR successfully. Training continues during teachers’ first full year working in Reading Recovery, with cohorts of at least eight teachers meeting weekly for three-hours. During these sessions, the teacher leader facilitates discussions on assigned readings and two teachers conduct 30-minute one-on-one lessons with their own students behind a one-way mirror. Following the “behind the glass” lessons – and consistent with pedagogical strategies meant to boost a sense of competence (Deci & Ryan, 2000) – teachers receive formative assessment feedback from their peers and the teacher leader. The teacher leader also visits each novice RR teacher to observe and provide additional feedback. (See May et al., 2015 for a full discussion of RR’s theory of action). Meetings organized around “behind-the-glass” lessons and regular observations from the teacher leader are also essential

components of the program's continuing professional development, which is required of all currently practicing RR teachers and which happens monthly instead of weekly. Jamie had just completed her first year of continuing PD when we talked.

Reading Recovery is a highly structured short-term intervention for first grade struggling readers. Targeted students score in the lowest quintile of a pre-assessment and receive intensive one-on-one instruction for 30 minutes every day for up to 20 weeks (Clay, 1993). Each lesson follows a predictable structure. According to Jamie, "The student reads a couple of familiar books to get warmed up for the lesson, and then they read the new book that we introduced [the previous day] while the teacher takes an assessment on the new book, and then they do some word work at the board... and then we do some writing and introduce a new book... [which] becomes the assessment for the next day." In its daily structure and in the assessment procedures used to enroll and monitor and discontinue students, RR is highly procedural and so induction into the program is similarly instrumental, focused on correct use of the assessment tools and meant to ensure fidelity of implementation. But, despite the program's structure, RR teachers are expected to exercise a lot of autonomy tailoring each lesson to the needs of their students. In a core text used as part of RR trainings, Reading Recovery founder Marie Clay wrote that RR teachers "must be able to design a superbly sequenced series of lessons determined by the particular children's competencies, and make highly skilled decisions [at each] moment during the lesson" (Clay, 2005, p. 23, as quoted in May et al., 2015). Professional discretion among RR teachers is evident in many ways – for example, the books they choose, the way they introduce books, the supplementary activities they plan – and cultivating this expertise demands both a competency-building and relational mode of learning.

Perhaps in part as a way to cultivate this discretion, the learning environment for RR teachers – both in their initial training and their continuing PD – pairs individual learners’ needs with the practical wisdom of the group. That is, individual teachers take turns presenting their practice (and their unique dilemmas of practice) in “behind the glass” lessons and then their peers – including the teacher leader, who also maintains a caseload of students – deliberate and discuss what they see. During the training year, Jamie said, presenting teachers received feedback on their lessons, but the continuing PD was “less about getting feedback ...[and] more about just being a springboard for discussion.” Through these discussions, even teachers who were not presenting found ways to connect what they saw back to their own practice, highlighting the reciprocal benefits of group work for individual members. Jamie explained, “When we’re talking about something that we see in a lesson we’re also bringing in our own schema about how that’s related to what we’re doing at our school with our kids.” For example, she recalled a session in which the student “behind the glass” was struggling with a book: “Everybody [was] perplexed about it because she was really super engaged during the introduction... and some of the things she was getting caught up on were pretty easy sight words.” During the ensuing debrief, one of Jamie’s colleagues suggested that the student may have been “anticipating a language structure that wasn’t there... like is she saying *go* for *get*, something like that, *can* for *come*.” “That struck a chord for me,” said Jamie, explaining that she had had a student in a similar situation with whom she’d been struggling. After re-analyzing the “running records” of her student’s reading, Jamie concluded that what her colleague had suggested about the student “behind-the-glass” was likely the cause of her student’s own struggles (even though, Jamie added, “I don’t think it turned out to be the same thing for the student we [observed], which was kind of funny”). The discussion in her PD and Jamie’s subsequent reflection about it led

her to make concrete changes to the way she introduced and talked about books with her student, which in turn helped her student make progress that had been up to that point elusive.

The intensity of attention paid to individual students and their mistakes was the source of some of Jamie's greatest insights about how children learn to read. Recalling her three years teaching kindergarten and first grade before becoming an RR teacher, she said, "When you're a classroom teacher, you don't really get the luxury of seeing a student one-on-one and yet the students who are most at risk of reading difficulty, they need that intense one-on-one instruction... You kind of do what you can but you can't quite get them to where they need to be." Moreover, she added, "When you see these students one-on-one they're all struggling, but the reasons why they're struggling are very different. And when you're the classroom teacher... it's hard to give them that individualized instruction that they really need to accelerate their learning whereas when you see them one-on-one you can focus in on some of those individual needs." But just as Jamie focused on the individual needs and struggles of her students, so too did her RR colleagues and teacher leader focus on Jamie's individual needs. And Jamie's positive perceptions of her collegial interactions were reflective of the sentiments of the larger community of RR teachers, across contexts and at scale. As May et al. (2015) explained, "RR teachers interviewed ...felt that the one-to-one interactions with the teacher leaders, observations and reflections on actual lessons, and interactions with other RR teachers helped them make concrete changes to their RR teaching. Many RR teachers reported that their RR training was transformative in terms of their own instruction and understanding about literacy" (May et al., 2015, p. 573)

In the course of working with students, Jamie and her colleagues regularly encountered moments of uncertainty in which they did not know why students are making

the mistakes they're making or how best to respond with instructional materials and techniques. For many teachers, such moments of uncertainty are experienced in isolation. For Jamie, the accompanying community of learners – colleagues “who have the same questions or have already thought through that problem that you're having” – was “really helpful.” Additionally, the continued mentorship of the teacher leader, who would come to observe and give feedback on Jamie's teaching by request, offered Jamie a level of more directive expertise grounded in deep content knowledge and emerging from her most pressing problems of practice. To illustrate the value of her teacher leader in boosting her sense of competence, Jamie contrasted observations from her with those from her principal. From her RR teacher leader she received “more targeted feedback about how the kids are responding to what I'm doing, as opposed to when the administrator comes to watch, it's more generalized about, you know, these are things that they noticed ... And I don't mean that to say that the feedback that I would get from an administrator is not helpful. But when you think about it, they're seeing such a range of lessons all the time in any given school that it's hard to be, it's hard to be knowledgeable about *everything* to the same degree that you could be if that was your specific role.”

The highly relational nature of Jamie's RR experience – the structured and reciprocal peer learning – was similarly influential in the process of *internalizing* the requirements of the program. Viewed from the outside, much of Jamie's continuing professional development through Reading Recovery is required of her. As long as she remains an RR teacher, she is obligated to attend these monthly meetings with the teacher leader. Such a requirement could be seen as *externally regulating* – that is, it induces behavior not for its own sake but as compliance. Such systems of external regulation, Deci and Ryan (2000, 2013) pointed out, could be corrosive for intrinsic motivation. However, they added, the presence of

relatedness could contribute positively to the transformation of “socially sanctioned mores or requests into personally endorsed values” (Deci & Ryan, 2000, pp. 235-236). By the end of her first year as a Reading Recovery teacher, Jamie seemed to have fully integrated the external regulations of RR. In comparing her RR experience both to other externally regulated PD experiences she’d had and to the experiences of other RR teachers, Jamie appeared to express intrinsic motivation for what had been a nominally required learning experience:

I’ve been in professional development in the past where it’s been after school and I’m like, “Oh, I don’t wanna go, oh gosh, I gotta go sit there for two hours and I just had this long day.” But I don’t think anybody felt that when we were going through that training year. It was like you wanted to go. You wanted to learn. It was just so interesting, and it felt so worthwhile and so connected to the work that you were doing ...I never dreaded going to professional development.

Implications

From the accounts discussed in this paper, I draw several implications for both the design and study of professional development.

First, reflecting much of the SDT literature, of the three needs identified by self-determination theory, autonomy seemed to be the most central, and autonomy-supportive behaviors tended also to support the need for competence and relatedness. Indeed, when given full autonomy over the design of their professional learning experiences, teachers appeared to act in ways that promoted their senses of competence and relatedness. For example, FFT grant recipient Fran perceived greater student enthusiasm and buy-in the redesigned science units that emerged from her fellowship, a perception that according to

SDT would likely contribute to increased teacher motivation for the content and the method of teaching that yielded the positive feedback. It would be instructive to consider in-depth how teachers exercised autonomy in professional learning and its potential effects on teacher practice and student learning.

In addition, both Wayne's Writers Workshop and Jamie's Reading Recovery experience offer potential implications for the design of required PD, so much of which can be seen by teachers as an imposition or an attempt to impede their autonomy. First, providing opportunities for autonomy-supportive behaviors during PD may enable teachers to find meaning and relevance in the content that may in turn lead them to assume greater ownership over the material and to make substantive changes following the PD. In Wayne's case, it was not clear that there were design elements in his workshop with Carl Anderson that enabled him to exercise the autonomy he did – rather, it may have been more a mark of Anderson's openness to participant feedback or his own relational orientation (as discussed more in Chapter III). However, the years-long leadership role that resulted from Wayne's assertiveness in the PD is instructive. As suggested by SDT, the presence of behaviors or strategies to boost one's sense of relatedness may have the effect of helping to *internalize* extrinsic motivation. That is, externally regulated experiences in which people see their behavior controlled by sanctions and rewards may over time become more consonant with personal values and identities. For example, Hargreaves (2008) pointed out that not all professional learning communities (PLCs) – much vaunted for their collegial structure – are experienced positively and that in fact some can be experienced as compliance-driven, but the externally regulated quality of PLCs could be mitigated by “living and learning” PLCs in which learning was understood as a “way of life” (p. 188). Another potentially promising example of a PD experience that consciously sought to incorporate strategies consistent with

self-determination theory was the “strength-based” Quality from Within (QfW) approach, a Dutch PD program in which teachers assessed the strengths of their students, their colleagues, and themselves and used group reflections to develop emergent strategies for more effective teaching and learning (see Zwart, Korthagen, & Attema-Noordewier, 2015).

Finally, as suggested by Hochberg and Desimone (2010), future research on professional learning would be greatly enhanced by closer attention to teachers’ perceptions, needs, and goals. For that matter, research frameworks for the study of PD ought to privilege teachers’ perceptions and experiences in order to better understand how PD design does or does not meet their learning goals and basic needs. The Zwart et al. (2015) study on the QfW approach was one example of research that accounted for SDT-related teacher outcomes. In addition, Janke et al. (2015) concluded that greater attention to teachers’ “need satisfaction” had important implications for their orientation toward continued learning, adding that “efforts to motivate teachers to engage in professional development will fail when teachers’ basic psychological needs are not considered or are even thwarted” (p. 193).

Conclusion

As noted in the introduction, teacher engagement is essential for learning. And as self-determination theory has demonstrated for decades, intrinsic motivation – defined in part by individuals’ satisfaction of the needs for autonomy, competence, and relatedness – is essential for engagement. The fact that so many teachers report feeling disengaged by professional development suggests that these needs have gone largely unfulfilled. One possibility is that the imperative for PD improvement at scale has obscured the individual nature of teachers’ need satisfaction and thus also their learning. In this paper, I have sought an area where these seemingly dueling imperatives – for individualized attention and for

scale – may find some common ground. Self-Determination Theory places individuals at the center, but it also makes generalizable claims about what individuals need for their wellbeing and how engagement can contribute to that wellbeing. In education policy debates, teachers themselves are essential resources for showing the way toward greater engagement and thus toward more effective professional learning. To varying degrees, each of the powerful learning experiences reported as part of this study contributed to teachers' feelings of autonomy, competence, and relatedness, which suggests that PD attending to these elements may be more engaging to teachers.

However, even though it may be possible to incorporate each of these elements into the generic design of PD, teachers' need satisfaction in any single PD will remain a function of each individual teacher and their relationship to the learning experience. For this reason, education policymakers and researchers must continue to pay mindful attention to teachers' experiences of learning (and powerful learning in particular). By continually listening to teachers' voices about when, why, and how they learn it may be possible to give teachers what they say they want: learning that matters.

III. Who They Are and How They Learn: Teacher Identity and Powerful Professional Learning

From one perspective, professional development (PD) is a shared experience, with many individual teachers inhabiting the same learning environment and being given the same material. Shared learning experiences are important from a policy implementation standpoint: conveying a single message to a large group of people responsible for the same outcomes presumably helps to foster coherence. But this laudable policy aim is complicated by the fact that within any single learning environment, there are as many unique learning experiences as there are learners themselves. One teacher's transformative learning experience may be just another Tuesday for her colleague sitting just a few feet away. What could help explain this variation in teachers' perceptions of professional learning? And what could a better understanding of this variation mean for PD design and policy?

One approach to answering these questions – and the approach I take in this paper – is to apply the analytic lens of teacher professional identity. The lens of professional identity is promising given its close attention to individual learners, including their past experiences, their guiding beliefs, and how they use these experiences and beliefs as filters through which to interpret their learning and with which to justify present and potential actions. It is my hope that the present study – with its inter- and intra-personal approach to studying PD – may serve as both a complement and an illuminating contrast to the research orientation predominant in existing PD literature, which tends to focus more abstractly (and therefore impersonally) on PD design elements and best practices.

Literature Review

Teachers' professional identity formation and re-formation occur continuously over time and represent a diverse range of influences. In his large-scale study of Swiss secondary school teachers, Huberman (1989, 1993) distilled seven distinct phases — if not a universal sequence through the phases— in the professional “life cycle” of teachers.²⁷ However, the temporal-linear tendency in Huberman's model may obscure the dynamic nature of identity development as well as the ways that personal or political variables could influence a teacher's self-conception.

In the decades since Huberman's work, studies of teacher identity have proliferated, and there has been general agreement among researchers that better understanding the concept has promising implications for improving teacher practice and teacher education (Schultz & Ravitch, 2013). But definition of “teacher identity” has proven to be as dynamic as identity itself, subject to continuous refinement and reconceptualization. For example, Sachs (2001) wrote that teacher identity “provides a framework for teachers to construct their own ideas of ‘how to be’, ‘how to act’ and ‘how to understand’ their work and their place in society. Importantly,” she said, “[it] is not something that is fixed nor is it imposed; rather it is negotiated through experience and the sense that is made of that experience” (p. 15). Further parsing these internal deliberations and applying theories of the “dialogical self” – in which the self is composed of multiple and sometimes contradictory “I-positions,” a term borrowed from Bakhtin (1981) – Akkerman and Meijer (2011) conceptualized teacher identity as an ongoing negotiation along three dimensions: multiplicity and unity, discontinuity and continuity, and social and individual. From these continuous negotiations,

²⁷ Huberman's phases corresponded more or less to teachers' years of experience: beginnings (1-3 years); stabilization (4-6 years); diversification/activism and reassessment (7-25 years); serenity and conservatism (26-33 years); disengagement, serene or bitter (34-40 years) (Huberman, 1993, p. 13).

they wrote, “a more or less coherent and consistent sense of self is maintained throughout various participations and self-investments in one’s (working) life” (p. 315). Beijaard et al. (2004), citing the need for “better conceptual clarity” (p. 126), reviewed existing literature and proposed four common features. First, teacher identity emerged from an *ongoing process*, “not only an answer to the question ‘Who am I at this moment?’ ...but also an answer to the question: ‘Who do I want to become?’” (p. 122). Second, it was *socially situated*, a function of individuals’ relationships and the school culture in which they worked. Third, it was *layered*, comprised of numerous “subidentities that more or less harmonize” (p. 122). And finally, identity formation and re-formation was an active and constructivist process, emerging out of teachers’ sense of *agency*. “[P]rofessional identity is not something teachers have,” explained Beijaard et al. (2004), “but something they use in order to make sense of themselves as teachers” (p. 123).

Incorporating these essential elements into an ecological model, Mockler (2011) proposed three overlapping and interacting domains: personal experience, professional context, and political environment. The *personal* domain related to “aspects of [teachers’] personal lives, framed by class, race and gender, that exist outside of the professional realm” (p. 521), including the formidable influence of teachers’ own experiences as students (cf. Lortie, 1975/2002). The *professional* domain covered aspects unique to teaching relative to other professions — for example, requirements related to teacher licensure and professional development — as well as aspects unique to specific school or district contexts. The *political* domain included “the discourses, attitudes and understandings surrounding education” (p. 522), often experienced by teachers through the media or governing ideologies and resulting policies.

Each of these conceptions appears to suggest that teachers’ professional identity

primarily *emerges from* their experience, but the inverse is also true: teachers' identity can *contribute to* the way they interpret their experiences (e.g., Schultz & Ravitch, 2013). In this vein, professional identity has been used to analyze and explain teachers' varied perspectives and behaviors. For example, crossing the professional and political domains, Sloan (2006) examined how teachers' identity affected their interpretations and responses to accountability policies in the US (see also Buchanan, 2015). Moreover, research that examines the *alignment* between teachers' identities and their perceptions of policies and practices within their professional context could offer insight into a range of desirable outcomes (e.g., see Day, Elliot, & Kington, 2005 on the relationship between identity and commitment to teaching profession). Given the central role of subjective interpretation in teacher identity formation, then, the ways individual teachers make sense of their professional learning experiences may offer a glimpse into their professional identity, at least as they understand it at a particular point in time. Thus, in this study, I focus on teachers' sense-making as it pertains to one aspect of the professional context domain in Mockler's model — professional development — but I include teachers' descriptions of personal experience and their observations about the political climate in which they work when relevant to their perceptions of PD.

Specifically, in order to better understand the relationship between teachers' identities, at least as teachers understood them at a particular point in time, and their experiences of professional development, I sought to answer the following research questions:

1. How do teachers' accounts of professional learning reflect or contradict some of the "anchoring beliefs" of their professional identity?
2. What implications can be drawn from such alignment or misalignment for

professional development design and policy?

Methods

The present study is a phenomenological inquiry, defined by Creswell (2013) as one that “describes the common meaning for several individuals of their *lived experiences* of a concept or phenomenon” (p. 76; emphasis in original). To analyze perceptions of the shared phenomenon of professional development, I conducted interviews with 25 teachers during which they reflected in-depth on a powerful learning experience (PLE) and what set these experiences apart from a negative learning experience (NLE). Given that the impact of any learning experience is often only evident with the benefit of time and the application of new ideas to practice, post-hoc interviews enabled participants to consider possible connections between professional learning and practice. From these 25 interviews and using an initial “explanatory proposition” about teacher identity and professional learning to guide my analysis, I selected three cases that offered instructive contrasts in order to explore alignment with one’s professional identity as a frame for explaining powerful professional learning (Yin, 2014).

Participant Recruitment

Employing a purposeful stratified sampling strategy (Patton, 2002), I recruited teachers from five adjoining school districts in the northeastern United States. The districts varied by resource levels, student demographics, and student achievement, and the teachers within my sample varied according to grade level taught and years of experience. I limited recruitment to currently practicing educators in non-charter public schools who had been teaching for a minimum of three years. I sought to recruit a sample stratified according to

grade level taught (primary and secondary) and years of experience (between 3-5 years and 6 or more years).²⁸

Bearing these restrictions in mind, I enlisted colleagues with the ability to reach out to large numbers of teachers — for example, district administrators or union leaders — to send an email invitation on my behalf, thus enhancing my ability to recruit a sample more representative of the teaching population as a whole than if I had relied solely on personal and professional “word of mouth” recruitment. Such broad recruitment proved initially effective, but did not result in a desirable sample size. I then leveraged professional contacts with connections to specific school leaders or teachers within the target districts. I began recruiting participants in July 2014 and ended recruitment in October 2015, although most recruitment happened during the first two months of the 2014-2015 and 2015-2016 school years, a time when teachers were neither under pressure associated with the ends of marking periods or high-stakes tests nor on vacation.

Sample

As noted above, my final sample consisted of 25 teachers in five districts.²⁹ There were more women than men (20 and 5, respectively), more elementary and middle school teachers than high school teachers (also 20 and 5, respectively), and more experienced teachers (6 or more years) than novice teachers (19 and 6, respectively). I did not ask teachers to self-identify their race or ethnicity. With the exception of grade level — which nationally is evenly split between K-8 and high school teachers — trends in my sample reflected national trends, in which 76.3 of the public school teaching force is women and

²⁸ I justified the cut-off between newer and more experienced teachers based on a report estimating that close to half of new teachers leave the profession within 5 years, marking the completion of five years as an important milestone in the lifespan of a teacher’s career (Alliance for Excellent Education, 2014).

²⁹ The names of all teachers and districts in this paper are pseudonyms.

more than 60 percent have been teaching over 10 years (National Center for Education Statistics, 2014). All of the districts except one had proportions of economically disadvantaged students that exceeded the statewide average. See **Appendix A** for a summary of district demographics and teacher characteristics within my sample.

Data Collection

I used a modified form of in-depth interviewing as a way for participants to “reconstruct and reflect” on a powerful professional learning experience (Seidman, 2006). Focusing in-depth on a single experience with each participant allowed me to account for the unique context in which learning occurred. To this end, I also asked participants to provide background and brief comparison cases by outlining their beliefs related to teacher improvement and describing a professional learning experience that they “would like never to have again.” For the full protocol, see **Appendix B**. Interviews lasted between 45 and 90 minutes. In addition to transcribing interviews in full, I drafted context memos immediately following each interview in which I recorded my observations of where the interview took place and the participant’s demeanor, reflected on my own role in our conversation and how I may have influenced the story, and considered how their story resonated with or challenged accounts from other participants. These memos served as important additional data sources.

Data Analytic Strategy

To aid in my interpretation of participants’ sense-making about professional learning, I sought to extract from my data teachers’ explicit and implicit “anchoring beliefs” about teaching and learning and how teachers get better. I drew the term *anchoring beliefs* from the

literature on entrepreneurship (Krueger, 2007), where it was used to denote deep beliefs that obstruct change and must be overcome. This notion of beliefs as obstructions to progress is similarly reflected in literature on human development and learning (Kegan, 2000; Mezirow, 1997). For example, a core tenet of Mezirow's (1997) transformative learning theory was the presence in adults of *frames of reference*, which he described as "structures of assumptions through which we understand our experiences" (p. 5) and which needed to be *overcome* in order to facilitate transformative learning. In conducting this analysis, I preferred the term anchoring beliefs for its clarity but sought to relieve it of its reputation as an impediment to learning or improvement. Closer in meaning to the more descriptive psychological concepts of *constructs* (Kelly, 1955) or *schema* (Lochman, Holmes, & Wojnaroski, 2008), anchoring beliefs as I interpreted them were a durable but permeable filter through which people saw and made sense of the world.

During the interviews and in subsequent analysis, I listened for participants' underlying beliefs about teaching and about themselves as teachers, salient design features or other attributes of their learning experiences, the perceived impact of powerful PD on their practice, and their overall perceptions of their learning experiences (both powerful and negative). For each participant, in order to surface their beliefs for analysis, I drafted "identity memos" to capture some of their explicit and tacit beliefs about teaching and learning and to summarize my interpretation of their professional identity. In drafting identity memos, I synthesized participants' responses to questions about their "baseline beliefs about teaching and learning" (for the protocol, see **Appendix B**). Using the beliefs emerging from these memos as an interpretive lens, I then considered the extent to which the learning experiences participants identified as powerful (and/or negative) reflected or challenged these beliefs. However, I concede that my distillation of participants' beliefs

about teaching and learning emerged from focused conversations about professional development, so it is possible that I was not able to account for the full complexity of their beliefs about teaching and learning and instead captured only (or primarily) those beliefs that support or are evident in discrete (albeit influential) learning experiences. Moreover, as I discuss elsewhere in this paper, it is possible that the professional learning they experienced *contributed to*, rather than emerged from, their anchoring beliefs.

As recommended for those undertaking explanation building across multiple cases (Yin, 2014), I approached this study with an initial “explanatory proposition” to explain teachers’ perceptions of powerful learning and to guide my analysis. I posited that teachers’ anchoring beliefs about teaching and about improvement would be reflected in the format or content of their most powerful learning experiences. That is, teachers would be more apt to assess a learning experience positively if it aligned with what they understood teaching to be and if they believed it could help them improve their practice. And because anchoring beliefs vary from person to person, surfacing them may be useful when interpreting teachers’ varied powerful professional learning experiences.

Limitations

I acknowledge several potential limitations of this study. First, as discussed briefly above, my data are cross-sectional and thus unable to fully account for the nuance of professional identity nor the ways that identity evolves over time. Given that identity formation is an ongoing process, therefore, the findings in this paper are bound by participants’ beliefs and identities as they existed when they were interviewed and their reflections on the past are necessarily filtered through their present beliefs. Related to this, the retrospective self-reported nature of the data – while essential for answering the

questions specific to this study – also has limitations. In particular, retrospective self-reports may be colored by participants’ biases and may be blurred by the haze of memory. For that matter, I too came to this study colored by my own experiences with professional learning and their accompanying biases (Peshkin, 1988).

To help mitigate this researcher bias, I took steps to reflect on and then “bracket” my personal experiences and beliefs when collecting data (Creswell, 2013). In addition, I shared selected transcripts chosen to represent diverse perspectives with my writing group and, using a technique that Lincoln and Guba (1985) call “peer debriefing” (p. 308), asked them to open code my data and then deliberate together about their findings. From this process, I found considerable overlap in coding patterns and emergent themes. Specifically, these peers independently identified alignment between teachers’ beliefs and experiences of learning. Similarly, I offered “member checks” to participants, allowing them to view copies of their transcripts and clarify their stories if they felt they had not adequately represented their own experiences (Creswell, 2013). Those who did examine their transcripts made no changes.

Finally, I cannot make claims beyond the lived experiences of teachers participating in this study. To corroborate or contradict these experiences, further research – potentially using quantitative surveys either alone or as part of a mixed methods study – could be used to examine a larger sample and to track changes over time in identity and perceptions about professional learning. Previously validated survey instruments about professional identity could be adapted to include questions about PD (e.g., Beijaard, Verloop, & Vermunt, 2000; Lasky, 2005).

Findings and Discussion

As noted above, teacher professional identity is a dynamic attribute. It evolves over time, and it is responsive to context. Thus, any cross-sectional study is a reflection of teacher identity only as it existed at a singular moment in time. However, in this study teachers were not only discussing the present; they were also reconstructing and reflecting on the past. Given this, one might expect to find alignment between their stories and their current belief system. That is, teachers — in filtering their past experiences through their present identity — would emerge with a largely coherent and identity-affirming narrative. Indeed, I generally found this to be the case. Leaving aside two cases in which I did not have sufficient data to determine alignment, 14 of 23 cases well aligned between the beliefs that anchored participants' professional identity and their self-identified powerful learning experiences. I discuss three of these cases in detail below. In addition, I found four cases of “partial alignment,” in which beliefs were apparent but incompletely represented in their accounts of professional learning. For example, Sandra, a veteran elementary school teacher spoke, about her convictions that teachers improved through a combination of trusted colleagues and constructive feedback. Eager to share two PLEs – a two-year cohort-based experience with Parker Palmer's Courage to Teach program and multiple weeklong institutes with the National Writing Project – she talked at length about what she learned from her peers, but she never spoke about receiving feedback on her teaching or on the work she did within her PLEs. I thus concluded that her story was one of partial alignment. Taken together, the cases of alignment and partial alignment meant that 18 of 23 PLEs were at least partially aligned with participants' professional identity. The five misaligned cases by and large seemed to be reflections of identity's dynamic and continuously evolving nature. That is, what teachers said they believed seemed not to be reflected in their recollections about past professional

learning experiences. This would suggest that their beliefs had evolved beyond their fond memories of good PD, but in at least one of these cases – highlighted in this paper as “superficially misaligned” – the teacher seemed better able to reconcile his present beliefs in light with his past experience and to see them as reciprocal.

In representing alignment between teachers’ identity and their professional learning experiences for analysis, I selected three cases of alignment that were clear and that served as illuminating contrasts to each other, thus highlighting the varying shapes that alignment could take. As noted, I also chose one misaligned case that I am calling “superficially misaligned” as a way to illustrate the complex and dynamic nature of teacher identity. Across all four cases, I observed areas of overlap, which I discuss in terms of implications for PD design and research both throughout my analysis and in detail at the conclusion of this section. My typology of cases, while instructive for understanding the relationship between teacher identity and professional learning, is not intended to be comprehensive.

Three Cases of Alignment: The What, The Who, and The With Whom

The following cases of alignment may help illustrate how the domains of teacher identity generally and individual teachers’ identities specifically may be useful in interpreting discrete professional learning experiences. That is, a teacher’s professional identity at any given moment may offer insight into the types of professional learning experiences he or she might find powerful.³⁰ For example, teachers who express a strong conviction that better content knowledge is vital for effectiveness (like Brynn, a middle school math teacher) will

³⁰ I recognize this statement assumes unidirectionality in the relationship between professional learning experiences and professional identity (i.e., that PD is primarily interpreted through the lens of professional identity and not vice versa). I willingly concede that this is not always the case and that in fact the relationship between identity and PD can be — and often is — reciprocal. My discussion of the “superficially misaligned” case helps to address incidences where, rather than merely reflecting professional identity, professional learning experiences play a role in identity formation, re-formation, or transformation.

find the *what* of PD paramount. Provided that the content is relevant and challenging, Brynn is likely to feel validated and find the experience valuable. In contrast, teachers who are more agnostic about content but express a mysterious if strongly held belief in the “intangible” qualities of good teaching (like Alex, a middle school social studies teacher) will find the *who* of PD to be of perhaps greater value. For Alex, the value of a PD is assessed in large part through the prism of how skilled or unskilled the facilitator is. Finally, teachers who say they learn best and most from competent and willing mentors, whether expert teachers or peers (like Carolyn, a first grade teacher), will find the *with whom* of PD is what matters most. Throughout her career, Carolyn has been dogged about seeking out mentors and colleagues — across content areas, in formal and informal learning environments — who were “really interested in opening up their practice,” modeling their thinking and mistake-making and sparring intellectually with her about issues of practice.

Below, I present the cases of Brynn, Alex, and Carolyn. Within each case, I offer some context for our conversation and relevant personal and professional background, identify the anchoring beliefs and powerful learning experiences that emerged from our conversation, and reflect on how they made sense of their PLEs in light of these beliefs. Where relevant, I also discuss areas of convergence and divergence across cases.

Case 1: “A philosophy about teaching math” (The What)

Mid-morning on a mid-winter Saturday, I sat at the back table of a crowded coffee shop. A light but persistent snow was falling outside and leaving a dusting on people’s hair and jackets as they shuffled in from outside. Having not yet met Brynn — a 7th and 8th grade math teacher in the working class immigrant city of Seaside — I found myself looking up every time the door opened and making friendly eye contact with every woman who

walked in. An introvert by nature, I was neither accustomed to nor particularly comfortable with such coy forwardness, but before long a short woman with black hair tied in a tight bun and wearing large silver hoop earrings caught my gaze and walked over to introduce herself. At the time of our conversation, Brynn was in the middle of her fifth year teaching middle school math. She came from a family of math teachers, all of whom advised her against teaching, but she said, “I just kept coming back to it.” An influential factor was her time working as a tutor for adults applying to graduate school, many of whom, she recalled, seemed to have a deep *fear* of math. In fact, responding to this perceived fear and helping her students see math differently as a way to overcome their fear was what motivated Brynn to teach in the first place and what still anchored her identity as a teacher.

Like many other teachers, Brynn talked about learning on the job and learning from experience, but unlike other teachers she seemed almost resigned to this mode of learning, half-hearted and almost pessimistic: “I think teachers become better teachers when they are teaching, unfortunately,” she said, as if there were few good alternatives. Elaborating on this point, she compared her work as a teacher to her time as a student teacher and seemed wistful for the collaboration and time for reflection she lost by graduating into the work force: “I think it’s really powerful if you can collaborate with other teachers who are good and share similar beliefs as you ... And I think once you get into the actual job, in many schools there’s just not the time and resources for that.”

Brynn’s referring to her work as a “job” was maybe a misnomer. For her, teaching – and teaching math, specifically – was more like a calling than a job. Dik and Duffy (2009) describe a calling as originating “beyond the self” – such as Brynn’s intuition that she just “kept coming back” to teaching despite admonitions to stay away – and marked by a connection between one’s work and a sense of purpose. Describing herself proudly as a

“math nerd,” Brynn identified her purpose as helping to demystify math, targeting ingrained but false perceptions of math as a discipline that prizes right answers over a deliberate process:

We treat math as black and white, do it this way... and I just – kids don’t connect to that, no one connects to that. ...I think one of the reasons I wanted to be a math teacher was really addressing that. So I try to teach students that mistakes are not just important to learning but they’re an integral part of a mathematical process, where that’s how we get better. We make mistakes and we share them and we correct them. But we have to make them first, and then we have to not be ashamed about that. We have to feel that making mistakes doesn’t mean that we’re done, we’re bad at math.

Professional learning in Seaside was marked by regular districtwide department meetings. Every other month, teachers signed up for either the Humanities or STEM (science, technology, engineering, and math) department meeting. Led by district administrators, the meetings focused on content matter, and (at least in the STEM meetings, which Brynn attended) teachers were given problems they could use in their lessons. As a new teacher, Brynn found the meetings helpful, but over time she saw them as repetitive: “In the first year, it’s like, ‘Oh, this is great. I can take these problems and go into my classroom and I have material that I can use with the students.’ And as a first year teacher that was great but as a fifth year teacher, seeing very similar problems that I already have, when I have a curriculum established already, it’s like, ‘Okay, great. What else can I do?’”

Ironically, perhaps, the PLE that Brynn described was very similar in design — a series of workshops in which math teachers were given math problems and worked through them. Brynn acknowledged as much and tried to work through this apparent contradiction, saying out loud to herself, “Let me try to see how [they’re] different.” The difference, she

quickly concluded, was in what they prioritized. The workshops she found so powerful, led by a man named Andrew Chen³¹, had more of a “pure math” focus and prioritized having teachers engage with the math and become more proficient. The department meetings, on the other hand, seemed to view math more instrumentally and emphasized proper use and pedagogy. In the Chen workshops, Brynn said, “you’re spending more time in groups actually solving the math, and it’s less one person telling you, ‘Here’s the problem, take it back to your classroom, this is how you should use it.’ It is more of, ‘Here’s the problem. Work on it in groups. Okay, what are the challenges? You solved it one way, solve it another way. How do you think your seventh grade student would solve it? How do you think a high school student would solve it?’ And actually giving us the chance to work through those problems and then presenting the answers to each other. ...And I think that has been really powerful.”

What made these workshops additionally powerful was that Brynn viewed them as deeply aligned with her own beliefs and philosophy. She explained,

One of the things that Andrew Chen espouses — and I’m going to admit my biases and say that I fully agree with this — [is that] if you’re a parent and your kid is sitting in the English classroom, you don’t want the teacher to have a high school level reading level. You want the teacher to have gone to college and be an expert in reading and writing and analyzing literature, and often math has the stigma of, “Well, I need to teach middle school math, so I don’t need to know calculus.” But you really should, to see all the connections. So I think one of the main goals of this course is really just getting people who are responsible for teaching kids math *better at*

³¹ As of this writing, Andrew Chen continued to offer PD to teachers. A brief biography, related to a professional development institute in New York State, is available at <http://usny.nysed.gov/rttt/ntinstitute/presenters/chen.html> (accessed April 12, 2016).

math. And I think that is a big key in math teaching.

In other words, Brynn had a strong anchoring belief that *teaching math — as, perhaps, is true in other disciplines — required a depth (and mastery) of content knowledge*. Her belief in this is consonant with numerous researchers’ findings (Bransford et al., 2000; Shulman, 1986). For that matter, there is a considerable body of research on teachers’ content and pedagogical content knowledge specifically as it relates to math (Ball, Thames, & Phelps, 2008; Hill & Ball, 2009; Hill, Rowan, & Ball, 2005; Lampert, 1990, 2001). And yet, few teachers I spoke to seemed to have internalized this conclusion as deeply as Brynn had. Her convictions about mathematical content knowledge were infused throughout the narrative she told, both about the Chen courses and about her own teaching. No other teacher talked to me with the same granularity and passion about her or his subject area, with Brynn at one point leaning forward to eagerly explain a “tape diagram” to me on the back of a napkin.³² Brynn said, “I think it’s really hard to explain math to kids if you don’t have a really, really good understanding of it. Not just like, ‘I can do the problem and I can go through the motions and show you the steps over and over again.’ But you have to understand it enough that you can anticipate the mistakes the students are going to make, that you can address the mistakes, that you can clarify the information in a way that makes sense to them.” About the courses’ focus on anticipating and valuing the mistakes students make during the mathematical process, Brynn recalled, “I don’t think it was the first time I’d ever seen that, but I think *the classes mirrored an educational philosophy about teaching math that I already had*” (emphasis added).

³² The context for this mini-lesson was a comment by Brynn about how the new Common Core standards required students to be proficient in using tape diagrams, and even though very few teachers encountered them as students they were now expected to teach them proficiently. A tape diagram, I learned, is a visual model that can be used to solve many types of word problems. Brynn used them to illustrate scaling ratios. For examples, see <https://www.engageny.org/resource/word-problems-with-tape-diagrams>.

The courses involved teachers sitting at tables with other teachers and working through a problem set handed out by the facilitators. The problems were strategically chosen to be what Chen called “low threshold, high ceiling” problems, which Brynn defined as having “multiple entry points, so that people of different levels of mathematics can really do the problem and solve it.” As teachers worked, facilitators would circulate and ask probing questions about their techniques, encouraging them to solve problems in different ways. As they circulated, facilitators chose different people — and people who had solved the problems in different ways — to present their work either at the board or under a document camera. According to Brynn, the choices about who to present and in which order were also strategic: “The idea would be that you would start with the most basic way to solve the problem and then involve more and more complicated mathematics to get the same solution but by a different way.”

I had seen this method of math teaching before. Listening to Brynn, I was immediately reminded of videos of middle school math instruction in Japan, recorded as part of the 1999 TIMSS Video Study that documented and analyzed math and science instruction across seven countries (Hiebert et al., 2003; Leung, 2005).³³ In Japanese classrooms, teachers on average introduced fewer but more complex problems in each lesson and devoted more time to them than their peers in other countries (Hiebert et al., 2003). In one video, the teacher circulated the room and selected students to go to the board and present their techniques, choreographed so that they would appear left to right on the board in order from more simple to more complex. Near the end of my conversation with Brynn, now well aware of her enthusiasm for math and math teaching, I briefly mentioned the TIMSS study. She immediately knew what I was talking about: “I think [Andrew Chen] models it after that,

³³ Full-length videos from the 1999 TIMSS Video Study are available at <http://www.timssvideo.com>. The video that came to mind for me when Brynn was talking is at <http://www.timssvideo.com/49>.

where you're looking at, 'Here's the problem. I am going to let them work on it, I am going to let them present their answers.' All the ones that I've seen from the Japanese classrooms, they're very much like that." I had not mentioned the Japanese classrooms, only the study, and so Brynn's allusion to them suggested to me a depth and breadth of knowledge and engagement with math pedagogy that exceeded many teachers.

In any professional learning experience, individual teachers may find a variety of features appealing or off-putting. Across my sample, teachers cited numerous reasons why they chose the PLEs and NLEs that they chose to share with me. For Brynn, the math content was by far the biggest draw. But just as notable as her enthusiasm for the content focus in these courses was her ambivalence towards other aspects, including the interaction with her peers (the *with whom*) and the pedagogy of the facilitators (the *who*).

The courses were structured such that teachers sat at tables and occasionally worked together, but collaboration and collegiality were not what Brynn found most valuable. If anything, she seemed to want more time on the math and less time for group reflection (which stood in notable contrast to her earlier fond recollections about time and collaboration during her student teaching). Brynn remembered group discussion and reflection as part of the courses' summative evaluations and as incidences when participants would ask facilitators to stop and reflect, but she dismissed both of these as superficial, even a distraction. In fact, Brynn remembered being one of a handful of participants who actively tried to reorient the group *away* from reflection:

there would be people like me who would specifically ask, "Can we save your reflection to the end and just do more math problems?" Because I think really, like seeing it and being in it, was the most helpful thing for me. I think so often it's, "Okay, stop reflect." And it turns into this kind of meaningless process where it's

not so much reflection, it's more we're going through the motions but we're not really getting anything more out of it. So for me, the most powerful thing was to be able to just do the problems, talk about the problems, focus on the math.

About the facilitation, Brynn appreciated seeing “good pedagogy techniques in action,” including the strategic choices Andrew and his co-facilitators made regarding the types of math problems and the way they carefully orchestrated teachers’ sharing their approaches to solving them. But she also remembered the facilitators themselves being “a bit condescending” — a result, she thought, of the durable stigma “that we have people who are teaching math but maybe don’t know math that well.” Even though Brynn admitted this stigma likely had “some foundations of truth,” she nevertheless observed actions that she considered off-putting. For example, she recalled, “there was one guy who came up and it was his day to present. He was going to go over something with us and he explained what the word ‘conjecture’ meant. You know, it’s like, ‘Yes, I’m a math teacher, I’m well aware, like I went to college twice, I know what conjecture means.’” Even Andrew, whose philosophy Brynn so connected with, seemed beholden to the stigma:

[Andrew] gave us a challenge problem, and he said, “If anyone can solve this, I’ll give you a hundred dollars.” And I was, like, “Really?” And he was like, “Yes.” And so I solved it. It wasn’t a particularly — like it was maybe like a very high-end high school or beginner college level problem. So I solved it. He only had \$80 in his wallet, he gave me \$80. But it was like he wasn’t expecting anyone to solve it ... And I think that’s unfortunate, but the assumption shouldn’t be that [the teachers] don’t know math and I think sometimes that might alienate your audience if you’re always making that assumption.

In terms of how (if at all) these courses impacted Brynn’s teaching, she conceded

that they probably did not “change anything drastically.” However, she was able to point to two concrete takeaways. First, because the courses were offered to all teachers in Seaside, Brynn strengthened her relationships with colleagues who were similarly enthusiastic about math and mathematical thinking, and the courses gave them a shared language they could use to talk about their practice. Second, and more practically, Brynn took away several “little strategies” that she saw modeled during the Chen courses — for example, being more strategic about students she chose to show their work and the way she talked to students about sharing their mistakes — as well as a new repertoire of Chen’s “low threshold, high ceiling” problems. To these takeaways, I would add a third: Brynn took away the experience of joy. Brynn enjoys math, and so it was not surprising that she enjoyed these courses. But the experience of being a learner in a learning environment where she felt intellectually challenged and supported, engaged in work that she loved, also presented an opportunity for her to reflect on how her own students experience math in her classroom. “One of the things that these courses reminded me of,” she said, “is [that] kids need time to just play with numbers and to do fun things with math so it’s not always like this, ‘Oh, I have to go to math class.’”

While many teachers in this sample had their beliefs and identities aligned with their experiences of professional learning, Brynn was unique in her almost singular devotion to content knowledge. Of all the PLEs in my full sample, 13 of the 25 teachers reported PLEs that were content-focused, but in most of those cases teachers did not choose them primarily because of the content nor did they justify their choices primarily because of the content.³⁴ Such singularity, then, might have suggested that Brynn was an exceptional case,

³⁴ Ellen, the K-8 math specialist introduced in Chapter II, talked about the importance of content expertise in how she *currently* selects PD. However, content expertise did not play a primary role in how she came to the PLE she described.

but I think that the clarity of her convictions and her determination to seek out professional learning experiences that contribute to her sense of mission offers an instructive case of how professional identity and professional learning can be mutually reinforcing. Brynn came to teaching driven in part by the zeal of her beliefs about math. This same zeal – and, I suspect, her impression that it was understood and respected by the facilitators and fellow participants – led her to keep returning to Chen’s courses, which in turn helped to preserve and sustain her sense of mission.

Case 2: “Teaching is performance” (The Who)

On a seasonably warm day during the last week of school, Alex agreed to meet me at a sandwich shop near where I live. Over six feet tall with wind-swept thick red hair, Alex swept through the door and was an immediate presence in the room. After giving me a firm handshake, he sat down across the small table from me and leaned in with an intensity and quickness I found both jarring and compelling. “Let’s do this,” he said with an assertive but inviting tone. It was easy to imagine him at ease in the frenetic energy of his middle school classroom.

Alex was completing his 16th year teaching when we spoke, all at the same school in the upper middle class town of Parkland, all teaching middle school social studies. Unlike Brynn, Alex’s route to teaching was decidedly not mission-driven. If anything, it seemed to emerge from a lack of other apparently viable options. Shrugging off his undergraduate degree in American Studies, he explained, “I think it was just one of those things where I thought, ‘Okay, I think I’d probably be a good teacher.’ ...Some people have these stories like, ‘It was my calling,’ or, ‘I was called to it.’ It was never like that for me. ...[I] couldn’t think much of anything else that I really wanted to do and I grew up with a teacher, so that

world felt familiar to me.” His route to his current job was as unexpected as his route to teaching was unplanned, largely the result of happenstance and good fortune. After finishing graduate school, he was re-taking a required language proficiency test just weeks before the start of school, when he got a call that a social studies teacher at a nearby school had resigned. “I mean, I think I went to a cheap clothing store – because I didn’t have anything to wear – bought cheap clothes, went and interviewed, then got hired few days later,” he said. “It’s the opposite of everything people tell you – you have to prepare for an interview – it was that fast.”

Regarding his beliefs about how teachers improve, Alex offered several rapid-fire responses, ticking off a list that included experience, professional collaboration, and a willingness to learn. Each of these approaches would have been worthy of further discussion, but instead Alex pivoted to what he called the “intangibles,” things that “you have to have in teaching... [but] that sometimes are not so easily accessed by [some] people.” In talking about “intangibles,” Alex seemed to express a belief that some people are born to be teachers. As another participant – an early career elementary teacher in a neighboring district – put it, “You meet a lot of teachers who say, ‘You either got it or you don’t.’” Alex likely would have agreed with this statement. Asked for an example of an “intangible,” Alex referred to his own teaching and specifically to his use of humor as a “bridge to learning... [and] as a bridge in building relationships with kids.” Although treated rather sparsely in the empirical literature (cf. Powell & Andresen, 1985; Ziv, 1979), humor was among the essential qualities of a good teacher proposed by Highet (1950), who like Alex noted its capacity to build positive relationships with students:

a clever teacher, who can use his sense of humor in such a way as to show the young that not everyone over twenty-five is dead, will at the same time learn enough about

his pupils to see that their silliness is only awkwardness, easy to penetrate and dissolve. Both sides will understand each other better, and work together.

Togetherness is the essence of teaching. (Highet, 1950, p. 64)

Related to humor and to Highet's contention that it can help ease students' awkwardness, Alex also noted his fearlessness about "looking ridiculous," which he claimed was especially valuable teaching middle school, whose students are "so much kids and so much about feeling self-conscious. They want to have somebody in front of them who feels comfortable around them and with themselves. I think that's easier for some people than for other people." Summing up what I would call one of his anchoring beliefs about teaching, Alex said, "*A lot of teaching is performance. A lot of teaching is being out there in front of kids and being comfortable enough in your skin to be a little outrageous and a little bit silly and not being self-conscious about that*" (emphasis added).

Alex's statements about teaching as "performance" appeared to place much of the responsibility for effective or powerful teaching squarely in the hands of the performer: they've either got it or they don't. As some researchers have observed, such teacher-centric assumptions have long been endemic to the performance metaphor in educational writing and research, opening it up to considerable critique (e.g., Pineau, 1994; Sawyer, 2004). Sawyer (2004) criticized the teaching-as-performance metaphor as "problematic, because it suggests a solo performer reading from a script, with the students as the passive, observing audience... [and reduced] teaching to an individualistic focus on the teacher as an actor" (p. 12).³⁵ Despite this, the quality of teacher performance – what I am calling the *who* – seemed central to Alex's assessment of his PLE and NLE. In both cases, his explanations for why

³⁵ As an alternative, Sawyer (2004) recast teaching as "disciplined improvisation," implying a foundation of content and pedagogic knowledge as well as a more reciprocal relationship with the "audience."

these experiences were memorable tended to focus on the “intangible” qualities – for better and worse – of the facilitators.

Alex’s PLE was a five-day workshop at the beginning of the summer, held at Parkland Town Hall and open to all middle school teachers. Teachers were strongly encouraged to attend, but it was not required. The workshop was an introduction to “Developmental Designs,” a program for launching an “advisory” structure and targeted specifically toward middle school. Alex called it “basically Responsive Classroom for middle school,” alluding to a program known for helping teachers establish and maintain positive classroom community (Responsive Classroom, 2016).³⁶ The association between Developmental Designs and Responsive Classroom was not incidental. According to its website, The Origins Program, the Minneapolis-based non-profit that created Developmental Designs, was for 17 years the “Midwest regional center for the Responsive Classroom approach, licensed by its founder, the Northeast Foundation for Children” (The Origins Program, 2016). In addition, in 2003, The Origins Program helped to found the New City Charter School, a K-8 school founded on the principles on Responsive Classroom and Developmental Designs and intended to be a “demonstration site for the consistent implementation of our approaches and to pilot new strategies” (The Origins Program, 2016). Alex mentioned that the facilitator of his summer workshop was the principal of a charter school named Jit. I inferred that he was Jit Kundan, principal of the New City Charter School.

The quality of Jit’s facilitation stood out prominently in Alex’s account of the experience:

³⁶ In fact, Responsive Classroom is a K-8 program, although its structures for building community and developing students’ social and emotional capacities are perhaps especially suited to self-contained elementary school classrooms. In contrast, Developmental Designs was developed specifically for middle school (although it now has a companion program for elementary school classrooms, called Elementary Designs).

He was a *great* adult facilitator. And I think one of the great things I loved about it was he was modeling everything he was talking about from minute one, you know. A lot it is training you on these circles of empowerment that you do with kids, different types of greetings and sharing activities. ...and he modeled *everything*. So he actually had you do all this stuff that he was trying to instruct you on. And he was a great adult facilitator. ...The thing that stood for me was just how great [it was] having a quality adult facilitator.

In his effusive description, Alex defaulted to the overarching term “great” to describe the facilitation, using it four times in six sentences. Seemingly searching for a concrete way to illustrate the intangible quality of the performance, Alex talked about modeling and added that Jit structured the week-long training “as if he were a teacher and we were his students,” introducing and modeling the rituals that were central to the program. Such symmetry – teachers being placed in the role of students – is not always or necessarily desirable. It can be perceived as inauthentic or condescending, as when Brynn’s dismissed what she described as her facilitators’ condescension toward teachers-as-students, but as Alex’s story makes clear it can also be experienced positively.

In Alex’s case, there seemed to be three interrelated factors that contributed to his positive assessment of the Developmental Designs training: his baseline of low expectations for PD generally, a dawning realization that the content was relevant to his work, and a deep admiration for Jit’s facilitation. First, like many teachers, Alex held professional development in general in low esteem. His reasoning appeared to be that his own experience was often more instructive than what he could learn through PD: “Having been teaching for a number of years, you walk into these workshops sometimes with a – you want it to be worthwhile, but you’re prepared for it not to be worthwhile. So you’re sort of like, ‘Okay, what this going

to be like? Is this going to be a lot of hot air or is this really going to be something meaningful?” This skepticism was mirrored by other teachers I spoke to. For example, Wayne, the 25-year veteran high school teacher profiled in Case #4, said bluntly, “Nobody [at my school] knows more than me now. It doesn’t mean they don’t know what I know, but they don’t know *more* than what I know. I want people who know better than me [teaching me].” Alex observed that his expectations tended to vary depending on whether he was attending a pedagogically-focused PD like Developmental Designs or content-focused PD. In assessing pedagogical PD, Alex expected the pedagogy to be good, but he also measured it against his own expertise. To use Wayne’s phrasing, did facilitators like Jit “know better” than Alex? Were they people he could learn from? Such calculus was not as foregrounded in content-specific PD, where Alex saw himself more as someone with something to learn: “When I’m taking a content workshop I have much more an expectation [of], ‘Oh I’m a student. I’m going to learn stuff.’ ...It could be that developing content knowledge is something that I feel like I need more of, especially if it’s subject that I’m not already strong in.” And so, Alex was customarily wary at the beginning of the Developmental Designs workshop, saying, “I walked into it not entirely clear how much I needed it.” But looking back, he added, “There is stuff I definitely got out of it that I felt like I needed.”

Alex’s dawning awareness of the workshop’s relevance for his practice turned his initial wariness into appreciation, and it seemed to be a shift made possible in part by an admiration for Jit’s performance as a facilitator. Alex noticed Jit’s facilitation skills early, even before the first day’s session began. “I have a distinct recollection of how [the workshop] started,” Alex recalled,

We were all coming in sort of mingling, chatting, how are you doing, blah, blah, and he was just sitting there looking around. And at a certain point we all realized, like,

he was our facilitator and he was not talking to anybody and he was sort of giving us his nonverbal cue that he was looking to get all of our attention. So the conversation eventually died down, you know. So that was really good, right from the get go. He was modeling from the word go and so ...on Tuesday we all came in and we all sat in the circle, like we knew, he was sitting there, he was waiting for us.

This “move” – sitting patiently and silently waiting for the group to realize what was expected – may have been a reflection of Jit’s facilitation or it may have been a scripted part of this five-day workshop (and thus anyone in Jit’s place would have done the same thing). But in either case, Alex recognized in Jit a deep comfort with adults. As further evidence, he pointed to Jit’s “*presence* in the room” and the way he asserted this presence when confronting Alex about violating one of the group’s norms:

In a totally joking way – I think we were moving around for a particular activity – I sort of went up to a colleague and gave a gentle elbow, like, “Get out of my way!” And I was elbowing past her and Jit came right up to me and goes, “What just happened there?” ...His whole thing was always maintaining a positive learning environment for everybody. “Is there a different way that you could have done that?” and I was like, “Yes, I could’ve asked her politely if she wouldn’t mind stepping aside,” something like that. He was right on me. He didn’t miss a beat.

This episode, in which one adult essentially reprimanded another adult as they would to a middle school student, might easily have been seen as condescending, much in the same way that Brynn found being told the definition of “conjecture” condescending. But notably, in reflecting on the incident, Alex seemed to view it as model facilitation. Listening to him discuss Jit’s pedagogical strategies, I wondered whether the respect he felt was born out of a disciplined perception unique to teachers that enabled him to interpret Jit’s actions through

the prism of his own experience and identity. That is, having acknowledged and positively assessed Jit's skill, Alex was able to see him as a fellow teacher and a credible source of expertise. This realization enabled Alex to set aside his intuitive skepticism for "pedagogical professional development" and his assumption that his own accumulated experience was worth more than outsiders' expertise.

Throughout his story, Alex kept returning to one aspect of Jit's facilitation (and one common across several powerful learning experiences): constant modeling. Each morning began with a circle and a greeting, a structure mirrored in the Developmental Designs advisory model, but within this structure – and other activities and strategies presented during the week – Alex recalled Jit "modeling interactions with students... very calm, very measured, very organized." Even in Jit's reprimand of him, Alex heard a call to be a good model of behavior delivered with a balance of measured assertiveness, describing the message this way: "We're modeling a way to interact here, and I'm going to reinforce it." Asked what made Jit a good performer, Alex was at first unsure. "It's intangible," he said, before adding, "He was very comfortable, very comfortable with adults. He wasn't afraid if he saw anything going wrong that he felt was not good and going right up [and] saying, 'Hmm.'"

As I reflected on Alex's story, I thought that what he was describing sounded in some ways like a more mature version of his own fearlessness, an ease with discomfort. I wondered whether, in Jit, Alex saw a better version of himself. In the three years since the workshop, middle school teachers at Alex's school had reorganized their schedules in order to accommodate new advisory periods anchored by many of the Developmental Designs activities. But for Alex, one of the biggest changes was the way he thought about himself as a teacher and his presence in the classroom, specifically regarding management and discipline.

Recalling something Jit said during the workshop – “make the kids do all the work” – Alex described his shift from someone who used to ensure compliance by using his tone and his voice to someone who uses his authority to have students reflect on their choices and behavior. It was a description that seemed very much in line with his impressions of Jit’s facilitation during the workshop – the quiet introduction, the subtle but firm reprimand, the persistent modeling over heavy-handed direction. It was as if Alex was remodeling his own teaching to be more in line with what he admired about Jit’s teaching.

Finally, if his PLE was a model of teaching done well for Alex, then his negative learning experience (NLE) was a model of teaching done poorly. Reflecting on a three-day workshop about “everyday economics,” offered through his district and facilitated by faculty at a nearby university, Alex was unequivocal in his assessment: “Awful... Every day of it was awful, the presenters were terrible, they were presenting material that was not applicable or relevant to our kids.” About the presenters, he described them as “boring” and “all lecture,” but more substantively spoke to what seemed like a lack of credibility: “I don’t think they knew their audience at all.” Alex further implied that – unlike other presenters he had seen – these presenters did not know “what teachers want,” which according to Alex was a blend of content knowledge *and* resources to help make that content relevant for students. In this sense, once again, Alex’s affinity for the *who* of professional learning interacted with his expectations. That is, the didactic and uninspired lecture style of the presenters at Alex’s course on economics might not have been such a problem if the course itself had not been billed as a course specifically geared for teachers. The stated purpose of the workshop carried with it expectations of expertise and relevance that were not met. Alex explained, “When something is billed purely as a content workshop and basically the equivalent of a graduate-level class, it’s one thing, but when something is billed as bringing this to the

classroom and it doesn't really accomplish that, that could be really frustrating." In other words, Alex seemed to have more modest expectations of people who were not teachers – who, almost by definition, could not have the intangible qualities of good teaching – but that he expected people leading workshops *for* teachers to *be* teachers themselves. It is, perhaps, a high or even unrealizable bar for most presenters of PD, but it is very well aligned with Alex's maybe insular but aspirational beliefs about teachers and teaching.

Case 3: "The relationship always matters" (The With Whom)

Walking down the wide empty sidewalks in a neighborhood of new construction and under the darkening late afternoon skies of early winter, I arrived at a quaint bakery tucked into a first floor corner of a featureless fortress-like office building. In marked contrast to how quiet and still it seemed outside, inside the bakery was full of life. I ordered a cup of tea and squeezed myself into the only remaining table, my back to the large window overlooking the sidewalk. Next to me, inches from my cup of steaming water, two women – one white, one non-white – were having an animated conversation in a foreign language. As they talked, they laughed knowingly. I noticed a piece of paper between them with an artful script, maybe Chinese or Japanese, and thought that maybe one of the women was a tutor with her eager student. Seeing this exchange, I thought for a moment about the unusual degree of racial and socioeconomic diversity that characterizes the small city of Lancaster, where Carolyn had been teaching first grade for the last eight years.

One minute past five, Carolyn walked in and immediately came over to the table, where she draped her downy winter coat over the back of a chair and laid a knit scarf on top of it. Unlike the other teachers I interviewed, Carolyn and I had mutual friends and had met before, which meant that we were able to recognize each other in a crowded café. After

getting her own cup of tea and a pastry, she sat down and curled her reddish brown hair behind her ears, where it cascaded down past her shoulders.

Carolyn told me that she took a “roundabout” route to teaching, but I think it would be more apt to say that she took a deliberate but personalized route. In other words, rather than following the path of entry laid out for many teachers (through a certification program then straight to teaching), Carolyn made a number of unusual but strategic decisions along the way responding to clear gaps she identified in her emerging capacity as a teacher. An English major at a small liberal arts college in the mid-1990s, Carolyn had expected she would be a college professor or writer or editor, but gradually she came to find her work at a day care center on campus more rewarding than the critical analysis she was doing for her courses. “I really felt like I was creating something or giving something,” she said. In this sense, like Brynn (Case #1), Carolyn felt called to teach. But with no education degree programs at her school, she cobbled together coursework in topics like developmental psychology before applying for and being accepted to Teach For America (TFA).

Attending TFA’s five-week summer institute in Houston and then teaching fourth grade in rural Mississippi for two years, Carolyn was all too aware of her novice status. At the time she was trained and placed, TFA was still in its adolescence and receiving mixed reviews from corps members for its training’s focus on “topics like learning theory and the sociocultural context of schooling” deemed unrelated to the urgent practicalities of teaching (Schneider, 2014, p. 433).³⁷ But rather than affixing blame on her training’s inadequacies, Carolyn’s assessment of her first years as a teacher was one of blunt self-awareness: “I was not great at it,” she said. “I think that I tried really hard, but [my years in Mississippi] really

³⁷ Interestingly, as Schneider (2014) documents and contrary to its outward facing image as a radical alternative to traditional teacher preparation programs, TFA’s practices and focus within its summer institute (then and now) appeared to show a deference to the topics and modes of traditional teacher preparation.

convinced me that I needed to persist and that I needed to become a much better teacher.” Deciding against returning immediately to graduate school – which she thought would be filled with more “idealized representations of all these beautiful thematic units and cooperative learning” – Carolyn decided she wanted first to “apprentice myself to a teacher in a really good school somewhere” and work as a paraprofessional. She explained, “I wanted to see a really effective classroom, even if it was a suburban classroom that wasn’t really serving the same population of kids. I just wanted to see what does it look like. You know, what does cooperative learning or all these things that I’ve heard about that I haven’t really been able implement successfully [look like]?” Getting a job in a suburban first grade classroom, Carolyn described her one year as a para as a chance to go back and re-do her student teaching.

Carolyn’s decision to voluntarily apprentice herself to an experienced mentor for an extended period – time for which she neither claimed nor received credit when it came to state licensing requirements – reveals a lot about her beliefs about teaching and learning. Seeing her training less as a bureaucratic credentialing process and more as a relationship-driven apprenticeship, Carolyn was undertaking what Lave and Wenger (1991) called “legitimate peripheral participation” in a community of practice, a socially situated process by which novices over time develop the knowledge and skills valued by more experienced members (p. 29).³⁸ During her year as a paraprofessional in a school (and then another five years as a teacher in a Catholic school as she pursued her graduate degree and state licensure), Carolyn took positions that involved “*participation* as a way of learning – of both absorbing and being absorbed in – the ‘culture of practice’” (Lave & Wenger, 1991, p. 95; emphasis in original). Gradually and through her relationships with mentors and peers,

³⁸ Notably, given Carolyn’s seeking out of an apprenticeship, Lave and Wenger (1991) sought to understand the process of legitimate peripheral participation by analyzing five ethnographic studies of apprenticeships.

Carolyn was forging her own identity as a teacher. And as she learned how to see herself as a teacher, she began to enact that identity through her practice and to move from peripheral toward full participation. Calculated roughly, this shift – from peripheral to full participation – took eight years, beginning with her first summer as a TFA corps member and ending with her last year as a graduate student teaching in a Catholic school. Only then, after an estimated 40 percent of the peer cohort who entered teaching at the same time had already left the profession (see Ingersoll, Merrill, & Stuckey, 2014, pp. 23–24), was Carolyn hired as a full-time first grade teacher in her current school, a place and a grade where she has remained for the last eight years.

The qualities Carolyn recognized as essential in good mentors – and the qualities she sought to project when she mentored student teachers – included a mindfulness about entering into the relationship and a willingness to be vulnerable. Specifically, she talked about how teachers benefit from “a veteran teacher who really is interested in mentoring them. Not someone who is just a magical star who is good at everything, but someone who is really interested in opening up their practice and who is self-reflective and willing to explain what’s going on [and] also willing to hand over responsibility to that person who is learning from them.” This self-reflectiveness included talking candidly about moments of uncertainty and about mistakes. Such candidness, Carolyn believed, enabled learners to see their mentor as someone credible, as someone who saw themselves as both a learner and a teacher. For example, during her year as a para, Carolyn recalled attending a training by Sharon Taberski, an author of numerous books about reading and writing comprehension who was still teaching and, in Carolyn’s recollection, “having a very difficult year”:

She was talking about how sometimes... she just wanted to scream out the window like, “Anyone know I’m up here?!” And I will never forget that, because I mean that

was *my whole experience* in Mississippi basically: “Does anyone know I’m in here?!” So having her say that, and just from the perspective of being such a star, made it so easy to hear what she had to say. And easy to be like, well, maybe it would work. The relationship *always* matters.

Her anchoring belief in the central role of relationships in professional learning – and the way that admitting mistakes or vulnerability can strengthen relationships – was a consistent theme in Carolyn’s accounts of powerful and negative professional learning. After noting that she had been fortunate to have “*so many* [professional learning experiences in Lancaster] that were wonderful... and really, really made me grow,” she talked about one specific PLE: her multi-year participation on a voluntary district-wide committee, convened by the English Language Arts (ELA) department, through which she and some of her peers were tasked with developing writing units of study for teachers across the district. Using as a point of departure units of study developed by Lucy Calkins – a professor at Teachers College and founder of the widely adopted Readers and Writers Workshop³⁹ – Carolyn explained, “We were trying to digest them and understand them and make them really accessible to teachers in Lancaster... You know, Lucy Calkins is awesome, but sometimes it’s a little overwhelming. And so we were ...adapting the units basically, and then we were working on developing assessments and then we did the training for people on the units.”⁴⁰ Carolyn’s motivation for joining the committee emerged from her own experience trying to better understand the curriculum and an altruistic impulse. “I’d been using these Lucy Calkins units and adapting them and using them very unsuccessfully at first and then sort of working through some things with the other first grade teacher [at my school],” she said.

³⁹ For more about the project, see <http://readingandwritingproject.org/about/history>.

⁴⁰ The writing “units of study” offered through Calkins’ Reading and Writing Project are substantial, including “teaching points, mini-lessons, conferences, and small group work” as well as implementation guides and assessments (see <http://www.heinemann.com/unitsofstudy/writing/>).

“But I think I had gotten to a certain point of feeling like ...I understood them and I understood what was hard about them and I had ideas about how to make that easier. And I was hearing a lot of the resistance and concern and the anxiety [from other teachers], and I felt like I can mitigate some of that if I can make the unit straightforward enough. ...I can actually make their lives easier.”

The work happened on two levels, both of which involved a relational dimension. First, led by district staff and anchored by the “democratic vision” of the ELA department chair, the committee met regularly – after school, some evenings, occasionally over the summer – to review the Common Core standards underpinning the units and to discuss the format and structure the units would take. According to Carolyn, a diverse team of teachers and administrators wrestled with the tension between scale and context: acknowledging the need to write materials whose structure would be consistent across the district, but responsive enough to the varied needs and capacities of many different teachers. An active participant in these discussions, Carolyn said she “never felt like I needed to hold back” and that when she had a question or an objection the leaders “were open to hearing that ...so that we could represent other teachers at our school who were coming with different perspectives.” Second, and arguably more meaningful for Carolyn personally, was the actual adapting and writing of the units, which happened in pairs. For one unit in particular, Carolyn was paired with Leah, another first grade teacher at a different school in the district. What made their work together so powerful for Carolyn was the way their deliberations challenged some of her core assumptions about good teaching and the way she was pressed to defend her beliefs. Their spirited exchanges stood out, because Carolyn so often felt unchallenged: “I feel like a lot of times people were like, ‘Okay, Carolyn is working really hard. She is fine. She is good. She’s got it.’ Even my coaches [were] so wonderful and

positive, but I don't feel like I really have to struggle to defend my pedagogical positions with people that I respect." The deference by her peers and her coaches may have come from a place of respect for Carolyn's experience and expertise, but the absence of challenge also limited her opportunities to continue learning.

Carolyn seemed to crave what Lave and Wenger (1991) called a "learning curriculum," defined as "situated opportunities... for the improvisational development of new practice" (p. 97). Through their discussions, Leah's willingness to engage Carolyn (and not just defer to her) generated these opportunities. A major point of contention in their deliberations was the need for Carolyn and Leah to reconcile their affinities for two different writing curricula – Readers and Writers Workshop in Leah's case and Literacy Collaborative (LC) in Carolyn's. In the Readers Workshop model, students read independently – sometimes for as long as 45 minutes at a time – and the teacher conferred with students individually or in groups. The Literacy Collaborative model, in contrast, had students rotating through different centers and then being pulled for guided reading with the teacher. The Calkins units of study assumed teachers were using the workshop model, but in fact first grade teachers across Lancaster were using a mix of the two programs. As a result, the units of study being produced by Leah and Carolyn needed to account for this mix. Moreover, Carolyn identified strongly with LC, having been trained in it at both her Catholic school and her current school. "I think probably most of my teaching comes out of that training and the coaching around it," she said. "It's like who I am as a teacher." And so in their work together, Leah and Carolyn had to read and understand the Calkins units and ask, "What's the heart of the unit and how can we present that in different ways?"

The debates led Carolyn to question some of her core assumptions. Having such a strong affinity for the LC model and so resistant to the extended periods of independent

reading characteristic to the workshop model, Carolyn said she had to ask herself why she felt the way she did. Some of her questions included,

Do you just want to do this because you've done it? And you have it in the bag and you're good at it, and you just want it to stay the same? And you're not willing to grow even if there may be evidence that kids learn more by reading independently for that extended period of time? ...It's not, you know, really against anything I believe in. Like, using a Basal reader and forcing all the kids read the same book, that's against something I believe in. But [independent reading] is not really. I want kids read what they love and I want kids to read books at their just-right level. And I had to really think about why was I so resistant to it.

As part of the work, Carolyn and Leah had long and in-depth conversations. Carolyn also visited Leah's classroom to observe her Readers Workshop. "I was really impressed," she said, "I was like, 'Wow, this is amazing.'" Seeing it in action warmed Carolyn to the ideas behind workshop, and it led her to conclude that the roots of her resistance were perhaps more systemic. First, she said, there seemed to be a tacit expectation that first grade teachers would switch to the workshop model, but such a shift required a lot of training and support that was expensive and not forthcoming. Related to that, the material resources required to undertake the workshop model were considerable: specifically, classroom libraries would need to grow exponentially to accommodate 45 minutes of independent reading from students who were reading short "just-right" books. "I would need to have for my lowest readers 10 or 20 books to last the 45 minutes -- or more because they can read them in about two minutes. And we have books in the book room that we used to teach reading groups, but I didn't have it in my classroom. ...Word Board [from LC] is just more manageable, if you don't have a huge classroom library." To help teachers make the shift,

Carolyn believed, the district would need to make a “massive shift” in how they allocated resources.

Having concluded that her resistance to the workshop model was not her “just being lazy” and that she did in fact like a lot of things about it, Carolyn set about to make concrete changes to the way she taught. Specifically, she worked with the other first grade teacher at her school to develop a “new model” for literacy instruction that they believed would prepare their students for longer stretches of independent reading. Calling it “Read and Relax,” Carolyn described it as Readers Workshop but only one day a week. Because it’s only once a week, Carolyn and her colleague did not need as many new books for their classroom libraries, but even that one day of independent reading generated positive results: “[It’s] worked really, really well,” said Carolyn, adding, “The second grade teachers have told us that kids are so much better prepared to sit and read and read and read and read and read than the previous classes that we have sent them.” More pointedly, the process of reflecting on and adapting the units of study – which were organized by genre – led Carolyn to reflect on the *relationship* between writers and their readers. These reflections changed the way she talked about reading and writing with her students:

Now I’m kind of like, ‘Okay... what's the purpose of punctuation?’ ...It’s not because your teacher says to put it there. It’s not because it looks pretty. It’s to help the reader read and understand. I could not have told you that, I don’t know, six years ago. Understanding what is fundamental about poetry or what’s fundamental about why do we have to have neat writing? Why can’t I write as fast as I want and as messy as I want? Because, you know, *our writing is a gift to our reader*. And when you think about your reader, you think about what the reader wants. And just understanding ...writing and reading at a more fundamental level and those kind of

essential questions ...has been probably what I learned.

More fundamentally, the process of curriculum development had implications for Carolyn's relationship to her district and to teachers in her district. Writing these units of study, she said, made her feel "connected to other first grade teachers ...in a way that I think is really important." In Carolyn's mind, such connections were especially important because they counteracted the dynamics of school assignment in her district that she thought implicitly discouraged collaboration across schools. In a system where families ranked school choices and where student population dictated staffing and resource allocation, schools competed with each other for students. "How 'highly preferred' you are, you sort of wear it like your badge of honor or shame," Carolyn said.

I mean they usually mean highly preferred by White and affluent families; they don't necessarily mean highly preferred by low-income or immigrant families. But the effect of that is not necessarily to make teachers not collaborate, right ...But it kind of creates this weird defensiveness, and if you think about it there's a lot of incentive for me to help the teachers in my school do an awesome job, but is there really an incentive for me to help the teachers across the district do an awesome job? I believe that's the right thing to do, and I believe that the more that we connect with each other and the more we support each other – like by hopefully writing units that are teacher-friendly and that are not super wordy and that are very straightforward – and if we say, "Look, I'm trying this. This went horribly wrong," I guess we can be sort of -- I don't know, try things out and tell everyone else how we failed. I felt like for me and Leah we were sort of fighting against the capitalist model that's been imposed on Lancaster.

When Carolyn describes collaborating across schools and sharing resources as "the right

thing to do,” she is making a value statement about the responsibilities of teachers that reflected what Hecló (2008) called “institutional thinking” – what professional athletes might call “respect for the game” – and which in Carolyn’s case was a deep regard for the *institution* of teaching that guided key decision-making and subsequent action. Hecló (2008) explained, “[Institutions] make claims on one’s thinking to acknowledge, and then through choices and conduct, to help realize some normative order reflected in the task of upholding the institution and what it stands for” (p. 102).

Carolyn’s institutional thinking was also evident in her description of a negative learning experience, a graduate course taken as part of her Master’s degree when she was teaching at a Catholic school. At the time she took this course – taught by an adjunct lecturer who was also an pre-school teacher – Carolyn had been in education for over five years and by her account was one of the only students in the class who was also teaching. Most of the other students were undergraduates or graduate students who had never had their own classrooms. The topic of the course was “developmentally appropriate practices” and according to Carolyn consisted of “these meandering storytelling sessions where she would just talk [about] her own kids, her own experiences and ...it was basically about how wonderful she was and how much she really focused on the kids’ individual interests and desires.” Aside from her disdain for the woman’s storytelling – “it was a show,” she said derisively and reflecting the critique of the teacher-centric performance metaphor discussed in Case #2 (e.g., Pineau, 1994; Sawyer, 2004) – Carolyn’s more salient objection was about the substance of her message: “I felt she was doing a huge disservice to all these new teachers and young people who didn’t know better and basically telling them something like, ‘Well, you should just wait and see what the kids are into and then do that.’” In justifying her frustration, Carolyn made two practical points and one overarching point about institutional

responsibility. Practically, she pointed out that (1) in most schools, there is a curriculum that teachers are expected to teach, and (2) most new teachers have limited repertoires on which to draw when responding to students' interests ("They have no, 'Oh yes, I taught volcanoes a few years back. I remember a few things about that.' They have nothing to draw on"). Besides which, she argued, "You're responsible. You can't just make decisions like that. You're part of a school, the school is part of a district. ...I felt like she was ...miseducating these young teachers and suggesting to them that if you don't do this you're inadequate and you don't really care about kids." In Carolyn's mind, the way teachers showed they "care about kids" was to be well prepared and mindful of the system through which students move. This is why Carolyn talked about the effect of her "Read and Relax" strategy not only on her students but on her colleagues in second grade.

And yet, as mindful as Carolyn was about the community of teachers to which she belonged, it is likely that the greatest beneficiaries of the committee work she engaged in were not the teachers on whose behalf Carolyn was working but people like Carolyn and Leah who engaged directly in these learning experiences. Depth of understanding and the ability to transfer knowledge from one context to another are enhanced by having an authentic task that one is motivated to accomplish and adequate time to do so (Bransford et al., 2000). It is hard to say whether other teachers would have felt motivated to engage in the curriculum development tasks in the same way as Carolyn and her colleagues did. In addition, replicating for other teachers the precise conditions that made the committee work so rewarding for Carolyn – the authenticity of the task (which was partly a function of her subjective interest and engagement), the partnership with a colleague who both understood and challenged her, and the considerable time investment – would be difficult if not impossible. But as the subsequent case make clear, sometimes the conditions under which

powerful learning happens can serve to shape and realign one's identity.

One Case of "Superficial Misalignment"

Where the aligned cases suggested how identity may shape teachers' perceptions of PLEs, I now turn to one case that may offer some insight into the inverse: that is, how professional learning experiences can contribute to the formation, re-formation, or transformation of teacher identity. When teachers have a professional learning experience that profoundly affects their beliefs about teaching, their view of themselves as a teacher, their day-to-day practice, or the trajectory of their careers, they may often tell and re-tell stories about the experience. Over time, these stories become durable milestones in the "stories [teachers] tell" about themselves (Beijaard et al., 2004, p. 123) and thus turn into concrete expressions of how they understand themselves as teachers.⁴¹ And while teachers' professional identities continue to evolve, these stories about powerful PD may go unchanged unless they are challenged. In the case below, I explore one teacher whose identity was profoundly shaped by the learning experience he shared, but whose current beliefs about teaching seemed initially incompatible with the story he told. Uniquely among teachers in this sample, this teacher was easily able to reinterpret and reconcile his durable story from his past to bring it more in line with his professional identity. In this way, I demonstrate the potential for reciprocity between experiences and identity: how experiences can re-form identity and how identity can re-interpret experiences.

Wayne had spent his entire career – more than 25 years – at a high school for what he called "emotionally disturbed" youth, much of it teaching English language arts in the

⁴¹ For more on the influence of retrospective storytelling on one's identity and well-being, see the sizable literature on personal myths and narrative coherence as they relate to human development (e.g., McAdams, 1993; McLean, Pasupathi, & Pals, 2007; Waters & Fivush, 2015).

“standards ready” track. At a glance, Wayne’s beliefs about teaching and his description of powerful learning seemed incongruous. When asked about how teachers get better, he talked without hesitation about *where* and *how* teachers learned: in their classrooms, through observation and concrete feedback from experts. Moreover, he said, classroom observations and concrete feedback were not only good, but they were decidedly *better than* workshops when it came to helping teachers improve. Despite these strongly stated convictions, though, his PLE was in fact a standalone workshop: a three-hour, mandatory afterschool workshop. The presenter never saw him teach, and Wayne never saw the presenter again. And yet, throughout his interview, he never hesitated in his assertion about how powerful — transformative even — this workshop had been. It seemed to hold a privileged place in the arc of Wayne’s professional identity development and had calcified into a rarely interrogated myth, so firmly embedded was it in his self-concept as a teacher and a learner. The experience had become a well-rehearsed story that he seemed to genuinely enjoy telling. In fact, so eager was Wayne to share tell it again that I barely had a chance to ask the question:

Interviewer: So, as I think I said in the email that you got, I’m interested especially in hearing from teachers about really positive and impactful professional learning experiences. And I’m wondering if you, in your experience, if you’ve had—

Wayne: Yes.

Interviewer: —one—

Wayne: Yes.

Interviewer: —you can really point to.

Wayne: Okay, Carl Anderson, from Teachers College, came in here, right...

Below, I present Wayne’s story in detail, sharing some context for our conversation,

identifying some of his anchoring beliefs, and considering how he interpreted (and re-interpreted) his PLE in light of these apparently contradictory beliefs. On the surface, Wayne's experience and identity seem misaligned – unambiguously so – but I argue that they are only *superficially* misaligned. Wayne's identity, formed in part by this PLE, is both durable and malleable enough that he is able to amend his story and bring it into greater alignment.

Case 4: "I want him to regard me"

On a warm September afternoon, I walked through an upscale neighborhood of meticulously restored Victorian-era brownstones. Turning a corner, I came upon a low-slung fortress-like building that seemed almost jarringly out of place. A large sign identified it as a public school, but there was nothing on the sign to indicate the school's unique mission in the district: an alternative therapeutic school for students with emotional disabilities or other risk factors. A K-12 school, with two satellite campuses, its teachers were uncommonly committed to its highly specialized student population. At least, this had been my impression when I spent time here more than five years earlier. I had been leading an elective five-session professional development series on peacemaking and school climate for a small cohort of teachers. Each teacher who participated in the series had a long tenure at the school and spoke knowledgeably and with deep affection for their students. Despite the unique — some might say overwhelming — challenges of their students, it was as if they could not imagine being teachers at any other school, and this impression left me with a lingering reverence for the school and its teachers.

As I walked up to the light blue front door, it swung open and out stepped Wayne. An inch or so shorter than I am, with black but graying hair cut short and thinning on top, Wayne had a wide smile when he talked, showing off a small gap between his front teeth. He

was casually dressed in a red flannel shirt, untucked. He led me through a metal detector that was turned off and opened his arms in welcome to what he called a 1960s-era “vintage” building. “Good location,” Wayne added, “no gangs. Well, one over there, but.” He waved his hand, but left the sentence hanging. Wayne’s language arts classroom was at the end of the first-floor corridor, a small walk-in closet sized room ringed on three sides with bookshelves, one of which obscured nearly an entire whiteboard. In the middle of the room was a small round table. Wayne pointed to a metal chair for me and pulled up a wobbly wooden chair for himself from a nearby desk on which sat a computer still running Windows XP.

Wayne came to teaching through what he described as “happenstance.” A graduate student in divinity school who expected one day to teach religion in a private school, he took a few classes in education and decided he would prefer public school. When he heard from a classmate about an opening at the school where he currently teaches, he called for an informational interview, was asked to apply, and then “two or three days later” was hired. Calling himself a “follow the flow” person, Wayne had held numerous jobs at the school over his 25 years. “I taught cooking, math, science, history, and English,” he said, adding, “I never had cooked, but I’m just telling you, when you get offered a job you say yes.” Because of the haphazard nature of Wayne’s career arc, he had to learn a lot about teaching on the job. When, after his first five years, he shifted from teaching vocational classes to what was then called the “college prep” track⁴², Wayne admitted, “I was dumbfounded. I had no idea how to teach a guy at 18 who can’t read. I hadn’t been trained. I went to divinity school.”

To learn what he needed to learn to be an effective teacher, Wayne relied on both

⁴² Wayne explained that this track is now called “standards-ready,” perhaps more reflective of the fact that in his 25 years teaching at his school he has yet to have a student graduate from college. “I have one who’s a sophomore [in college] now,” he added. “God willing.”

informal relationships and formal PD. “On a practical level,” he said, “good teachers share their information... I basically made friends among staff... The most important thing for me has been my friendships. You know, working with a few people, writing lessons together, planning together, that’s been number one.” One colleague in particular — referred to throughout our conversation as “my buddy” — was a former teaching assistant, now with his own classroom and with whom Wayne had been collaborating informally for eight years. But as central as collegiality was to Wayne’s development as a teacher, he also pointed to formal professional development that had helped him grow, including a course he took early in his career through which a facilitator from Project Read watched him teach once a week and which he called “hugely helpful” and then his years-long involvement with Writers Workshop, the Lucy Calkins program adapted by Carolyn (Case #3) and which Wayne effusively said he was “massively in love with.”

Reflecting on the range of formal and informal professional learning experiences he’d had during his long career, Wayne was confident – brashly so, even – identifying what he believed was necessary for teachers to improve: *observation* and *feedback*. Essential to both of these modes of improvement for Wayne was *where* they happened: “You can’t do great professional development if no one comes in your classroom,” he said. “You can only go so far with teachers with conceptual ideas. You have to see where the rubber meets the road... I mean, I could go to a great [workshop about conferring with writers] and I could be inspired for three or four hours, but for real great change I need someone to see how *I* confer.” As evidence, Wayne recalled a visit to his classroom from “one of the Biggie Wiggiers” from Writers Workshop: “Immediately she made corrections on some of the things I was saying to the students... Like she just immediately [said], ‘I think you’re breaking it down wrong in how you’re presenting it.’ It was a small thing, but it meant a lot

at the time. And I couldn't have — I couldn't step out of myself to see me... because it was like *I thought I was doing it right.*" In a workshop, Wayne believed, any misconceptions that he had would have gone unnoticed — by him and the presenter — and therefore been left uncorrected. It was only through being observed by someone with expertise and then given feedback that he was able to "see himself" in a way that enabled him to improve. One of the reasons Wayne gave for why such "feedback in context" was so important was the heterogeneity of teachers, including their varied capacities and learning needs. "There's such different levels of skill and ability among teachers," Wayne explained, "that what I need and am thinking of is just at a different level or plane than some others." Indeed, the capacity to craft learning experiences that would appeal to the diverse needs of his students was something Wayne himself had worked hard to improve, so he believed that it was not impossible to do. The key for PD, he thought, was for a facilitator to organize a workshop so that teachers saw themselves as "all kind of on a common mission."

The workshop Wayne identified as his PLE — a single three-hour, mandated, after-school presentation 12 years earlier — seemed barely aligned with the anchoring beliefs Wayne expressed in our interview. The presenter, Carl Anderson, a staff developer with Calkins's Reading and Writing Project at Teachers College, was a content expert, but he never observed Wayne teach and so never gave feedback on Wayne's teaching. For that matter, it was not clear whether Anderson had succeeded in cultivating a sense of "common mission" among the teachers. Wayne barely noticed other teachers' reactions, admitting that he was "really in my own head." Superficially, the session — as recollected by Wayne — seemed unremarkable and not unlike numerous participants' reports of typical and undifferentiated afterschool PDs:

It was set in a large room. We sat in kind of a circular type thing. He was in the front.

He had an overhead projector and tons of—this was pre-whatever, um, whatever those clear things were. Transparencies... So he came and he asked us what do we want from [the training]... and then he started to introduce his whole thing, which was gonna be a focus on conferencing with kids about their writing. And he talked about it for while and gave examples.

And yet, despite the boilerplate nature of this description, Wayne's enthusiasm — even more than a decade after the fact — was undiminished and suggested that the outward appearance and design of a workshop was not necessarily (or even primarily) what made the learning experience powerful. Clearly, for Wayne, this workshop with its “sage on the stage” set-up resonated. What could explain Wayne's effusively positive assessment, even all these years later? More pointedly, how did he make sense of his stated convictions about observation and feedback with his experience of powerful learning that lacked both?

When I asked Wayne to reconcile his resonant experience with Anderson with the fact that Anderson never saw him teach, he seemed briefly taken with the contradiction but moved quickly to resolve it. “Isn't that amazing? So I'm being hypocritical,” Wayne said, before adding,

Yes, him coming to my class would have been *more* transformative, but because I saw so much student work and the work he pulled out reflected some of the challenges of my students rather than generic high school kids — because your average high school kid is at a higher level than your average kid [at this school] — the fact that he was able to adapt by pulling out texts of such struggling writers, I think almost made me feel like he was talking to my students, what I face on a daily basis. And I think that's what made it, you know, feel so transformative.

Over the course of Wayne's subsequent years-long involvement with Readers and Writers

Workshop in his district, he did have many people come to observe his classroom and give him feedback – as with the “Biggie Wiggier,” mentioned above, whose content expertise enabled her to effortlessly make a small but significant correction in Wayne’s practice – but at the time he was sitting in this PD with Carl Anderson he had no way of knowing this. For that matter, none of the observations Wayne received through his involvement with Readers and Writers Workshop stood out as prominently in his memory as this single afternoon workshop. Moreover, it was not as if the experience with Anderson *became* powerful only in hindsight and after Wayne was observed by similarly appointed experts; rather, Wayne vividly remembered it being powerful *in the moment* it was happening. And so Wayne’s powerful perceptions were perhaps attributable less to the mode of learning (workshop vs. observation) and more to the demeanor of the individual who was teaching.

Through this workshop, Wayne connected in various ways to each of the three alignment types discussed earlier. Like Alex (Case #2), Wayne deeply valued “the *who*” as an influential feature of his PLE. In addition, Carl Anderson was a content expert — somebody who knew more of “the *what*” than Wayne — but more powerful than his expertise or his performance was his responsiveness to the audience (“the *with whom*”). Unlike Alex, who emphasized Jit’s constant modeling of effective facilitation and made little mention of the interpersonal dynamics within his PLE, Wayne focused intensely on Anderson’s *relationship* with his audience (and with Wayne in particular) more than the discrete pedagogical moves he made. Wayne marveled at Anderson’s use of student work, saying, “*Every time* he made a point, he would show us — so he’s talking about a great way to confer, he would put up on the board, ‘Here’s a paper. I met with this kid on, this is what they were writing and this is what I said, and this is what came from that.’ So it was really practical.” And yet, as indicated earlier, Wayne was initially skeptical that Anderson’s samples of student work could speak to

the unique problems of practice that he faced with his students. It was only after seeing the range of student work Anderson presented – some of which was in response to Wayne’s questions – that he changed his mind and concluded that Anderson “was talking to my students, what I face on a daily basis.” “He assessed who we were and adapted,” Wayne said. Such responsiveness is vital for transfer — Bransford et al. (2000) called the capacity to read an audience and adapt to their needs characteristic of an “assessment-centered” learning environment — but for Wayne it was more than merely instrumental. For him, Anderson’s responsiveness was an *act of caring* and being cared for, and he elevated this perception of care into a privileged place in his assessment of Anderson’s performance:

For professional development, you want to like that person [presenting]. You want to feel like there’s a back-and-forth. So I’d say the relational part comes back to me there. [Carl Anderson] was able to make us like him – by honoring us and being funny and interesting and not dogmatic, you know? “Oh, that doesn’t work? Let’s try this,” rather than, “No, you do it this way,” you see what I mean? That little thing there means everything to me... Don’t we all wanna be special? Isn’t that the way it works? ...I mean, I know when he goes home he forgets I exist. I don’t care about that. I’m not trying to be special on that level, but at that moment I want him to be like, I want him to *regard* me. I want him to take me seriously, right? I don’t wanna be special with a capital-S, but at that moment—you know, I always say to teachers when they first work here, the kids here wanna feel like you love them to the point that you will jump out of a building for them. You *won’t*, but people want to feel cared for at a certain level. Not that I want Carl Anderson that way, but we all wanna kind of feel like he regards us and ...for that one moment his attention is on us or me or whomever it is speaking.

Wayne's notion of *regard* called to mind Sarason's (1999) conceptualization of the teaching-as-performance metaphor. Grounding his notion of the teacher as a performing artist in Stanislavsky's (1936/1969) theory of artistic performance, Sarason described the expectation of an audience that they will be respected no matter how many times a performance is given: "Audiences do not want to feel that they are being treated to a routinized performance," he wrote, "[T]hey want to identify with the role, they want to 'lose themselves,' to be caught up in the welter of thought and feeling the role requires. Audiences want to be respected, not to feel they are being taken for granted" (Sarason, 1999, p. 13). Stanislavsky (1969) popularized this orientation toward performance — what he called "true art" — and contrasted it to the "school of representation," through which performers perfected mechanical repetition but lacked feeling and inner motivation. The school of representation, Stanislavsky (1969) cautioned, was "effective, [but] not powerful" (p. 22). In Anderson, Wayne experienced a teacher who was deeply knowledgeable and skilled at improvisation. Anderson had a role to play but not a precise script and so he was able to be responsive in a way that Wayne perceived as profoundly respectful.

In contrast, Wayne recalled another well-regarded authority on adolescent literacy who came to the school, Richard Baker ("people all worship this dude," said Wayne).⁴³ Like Anderson, Baker was a content expert. Like Anderson, Baker led a workshop at the school. Unlike Anderson, Baker *did* come to visit Wayne's classroom. But Wayne's assessment of Baker was notably less adulatory than his assessment of Anderson, and the difference seemed to be largely in how they made him *feel* as an "audience" member. In Wayne's mind, Baker calculated and routinized his performance in a way that undermined his message, paying insufficient attention to the tacit relationship between him as a facilitator and the

⁴³ Because Wayne's comparative assessment of Baker is less positive, I used a pseudonym here.

teachers who were his learners. Baker, said Wayne, “came with a kind of like, ‘I wanna tell you what I wanna tell you’ ... and I want someone coming from the, ‘I want to know what you need.’ ...I thought he wants me to *be* him, but I want him to teach *me*.”

In addition to Anderson’s interpersonal style, another possible explanation for why Wayne found the session so transformative was its relevance and its practicality. That is, coming when it did, Anderson’s workshop scratched a long-standing itch Wayne had been thus far been unable to reach himself. In Wayne’s retelling, he had long known that one of his biggest shortcomings as a teacher was helping struggling writers improve their work. “Before Writers’ Workshop... I think I basically tried to say, ‘This is how you do it,’ and then we’ll put it up on the board and I’ll come and correct,” Wayne said. “But I think that was my deficiency. I didn’t have a good language for taking really struggling writers and knowing how to talk to them about their writing and where to attack it. It was so overwhelming.” And so when Anderson came with example after example of student work and with story after story of how he conferred with struggling writers, Wayne recognized an approach that he thought he could use.

Each of these explanations — about Anderson’s responsiveness and the relevance of his content — could be seen as *amendments* to Wayne’s anchoring beliefs about teaching and learning and improvement. In describing and reflecting on his PLE with Carl Anderson, Wayne never revised his convictions about observation and feedback. Rather, he said he thought his experience would have been even “more transformative” if the information Anderson shared and the way he comported himself had been supplemented by observation. Viewed one way, then, Wayne’s perceptions of this learning experience in hindsight were more durable than his beliefs in the present. Over time, this one-day experience with Carl Anderson continued to resonate as a milestone even as his beliefs continued to evolve.

Viewed another way, though, this learning experience may have been instrumental in shaping and re-forming his present beliefs, which he could have then used to re-interpret the experience and bring it into alignment. In this sense, Wayne's PLE would have only appeared misaligned with his beliefs when instead they may have been more reciprocally related.

Looking back, Wayne's present beliefs about observation and feedback had echoes of what he found so valuable about Anderson twelve years earlier: regard. To be regarded is to be seen. In talking about why classroom observation was necessary for change, Wayne said, "I need someone to see how *I* confer." When done well, such observations helped Wayne to step back and see himself in a way he could not have done alone. Wayne needed to *feel seen* so that he could then *see himself*, something that Carl Anderson provided for him and something that became solidified over his many years of involvement with Writers Workshop. Ultimately, the identity formed by his learning experience may have been more durable than the story he told about it.

Implications

I introduced this paper by observing the variation across teachers' stories of powerful professional learning and asking how best to make sense of this variation. The combined concepts of teacher professional identity and anchoring beliefs offered an instructive analytical lens, with many teachers' retrospective accounts of powerful learning generally aligning with their current beliefs. Thus, variation in powerful learning could be said to reflect the considerable variation in teacher beliefs and identity. Such alignment is unsurprising, since the process of identity formation and re-formation is a process meant to better align one's values with one's behavior and vice versa. As Buchanan (2015) explained,

“Teachers... confront the policies and professional discourses they encounter not as *tabulae rasae*, but rather actively use their own preexisting identities to interpret, learn from, evaluate, and appropriate the new conditions of their work... In this process, their identities are reformed and remade” (p. 701). In line with this assertion, the above cases help make clear that teachers’ meaning-making about professional development is filtered through the prism of their own experiences and beliefs.

However, as uniquely individual as these beliefs may be, an identity framework for understanding professional learning – such as the one outlined by the three cases in this paper (the *what*, the *who*, and the *with whom*) – would suggest that these beliefs may also fall into some more general and therefore instructive categories. Like Brynn, many subject-area teachers – and even general education teachers – come to teaching with a deep passion for their domains (the *what*). Recall that Carolyn was an elementary teacher who seemed to have an especially strong attachment to reading and writing. Indeed, her deep exploration of reading and writing may have in part reflected her undergraduate degree in English and the career she imagined she would have in academia or publishing. Similarly, both Alex and Wayne – and many other teachers in this sample – spoke in glowing terms about the charisma of effective PD facilitators (the *who*). Alex hypothesized that the performance he valued so much from Jit may have been “intangible,” but Wayne’s reflections about Carl Anderson suggested that learners’ perceptions of charisma may, in some cases at least, have to do with the facilitators’ care or regard for the learners. Finally, Carolyn’s affinity for learning from her colleagues (the *with whom*) was widely shared other teachers. Although not all in terms as strongly as Carolyn, 13 of 25 teachers interviewed for this study expressed anchoring beliefs that were variations on a belief that constructive professional relationships with colleagues were vital for improvement.

Taken together, then, this identity framework challenges conventional wisdom about professional development in some important ways. First and perhaps most fundamentally, it challenges an underlying assumption common in PD research literature that there is one best way to design good or effective PD. Consider the proliferation of “best practices” frameworks focused instrumentally on PD design (e.g., Garet et al., 2001; Ingvarson et al., 2005; Kennedy, 1998; van Veen et al., 2012).⁴⁴ Important though many design features are, the accounts shared by teachers in this study remind us that different people value different things. For example, PD that is thick with “active learning” strategies or coherent with district strategy may still miss the mark if it does not also appeal to teachers’ sense of themselves. In this sense, PD designers would do well to attend to individual teachers’ learning needs by surveying teachers on what they most want to learn, offering differentiated PD choices, and giving teachers some degree of agency over their PD.

At the same time, the three dimensions of PD outlined in the identity framework are not merely a reflection of teachers’ personal preferences. On the contrary, to varying degrees each of them have been empirically validated. Regarding the *what*, the value of content knowledge and associated pedagogical content knowledge to the improvement of teachers’ practice has been widely adopted as a core principle of teacher education (Borko & Putnam, 1995; Hiebert, Gallimore, & Stigler, 2002; Shulman, 1987). The research on mathematical knowledge for teaching in particular was discussed briefly in relation to Brynn’s case. Similarly regarding the *with whom*, the benefit of a healthy school community on teacher practice and student learning has been well established (e.g., Bryk, Sebring, Allensworth, Easton, & Luppescu, 2010; Louis & Marks, 1998; Rosenholtz, 1989). In addition, more recent research has suggested that relatively informal peer-to-peer learning among individual

⁴⁴ I further documented the limitations of these frameworks in an earlier essay (Noonan, 2014b).

teachers – such as Carolyn’s partnership with Leah – had a significant effect on student learning (Jackson & Bruegmann, 2009; Papay et al., 2016). On the surface, there is less empirical corroboration for the standalone impact of good performance teaching (the *who*), at least as Alex interpreted it. Hattie and Yates (2014) noted that “[e]xposure to successful performances may not, within itself, constitute a viable modeling stimulus for learning” (p. 73). That is, mere observation of model practices, unaccompanied by some degree of direct instruction from a knowledgeable instructor, tended to be insufficient for deep and sustained learning. But as noted above, Wayne’s perception of Carl Anderson’s performance was both more subtle and more substantive than mere admiration for a good show. Rather, his appreciation for Anderson’s performance was supplemented by its resonance with what Wayne most wanted to learn and by an awareness of what he called *regard* – a notion of modeling, deep knowing, and reciprocity perhaps more common to a long-term intensive mentoring relationship or a well-established community of practice (Glazer & Hannafin, 2006; Lave & Wenger, 1991). The extent to which such regard is evidenced in briefer day-to-day interactions within professional development – and the impact of this perceived regard on teacher practice – is an area ripe for continued research.

Finally, just as it is important for PD designers to know and respect teachers it is equally important for teachers to know themselves. Anchoring beliefs – the values that underlie and guide their decision-making – may not always be apparent to teachers. For that reason, the time for reflection afforded by teachers’ participation in this study may have been useful for some teachers to surface and make these beliefs visible. For Wayne, the metacognitive process of being interviewed about his anchoring beliefs and re-telling a story about his professional learning experiences appeared to offer an occasion for him to reappraise and reconcile his experiences in light of the ways his identity had evolved over

time (e.g., McAdams, 1993; McLean, Pasupathi, & Pals, 2007; Singer, 2004). Beliefs that may have been tacit – for example, the priority Wayne placed on what he called the “relational piece” in learning environments – became visible. In making his beliefs visible, Wayne experienced his anchoring beliefs similarly to the ways that Krueger (2007) and Mezirow (1997) imagined: as objects to be amended or transformed. They were filters through which he made sense of his experiences, but they were also incomplete. Similar opportunities – formal or informal – for teachers to tell stories about and reflect on their beliefs and experiences with professional learning might be instructive insofar as they could help teachers clarify who they are in the present moment and what they believe. Such awareness could in turn help teachers seek out professional learning experiences better aligned with their beliefs and identities or respond substantively if and when they are asked about their professional learning needs.

Conclusion

Each teacher – like each student in their classrooms – brings to their learning experiences a unique set of beliefs and values and interests, past behaviors and aspirations for the future. This sometimes bewildering brew of individual characteristics, which together comprise one’s personal and professional identity, must be treated for what it is: a singularly influential filter through which learning happens or fails to happen. Recent developments in PD policy and design suggest a promising turn toward greater personalization, with some teachers given greater latitude by their districts to design unique programs of professional learning (Sawchuk, 2015), others individually paired with colleagues for ongoing peer-to-peer learning (Papay et al., 2016), and still others leveraging social media to meet their varied learning needs (Carpenter, 2016; Carpenter & Krutka, 2015). Because teachers’ identities

evolve over the span of their careers, more nimble and responsive approaches to professional learning like these – and in contrast to standardized, one-size-fits-all programs – may become increasingly valuable toward ensuring teachers’ continued growth and improvement.

IV. When Teachers Choose: Teacher Agency and Powerful Professional Learning

Teachers spend a lot of time in professional development (PD), but it is not clear how much they are learning. Studying three large urban public school districts, the organization TNTP (2015) reported that teachers spent an average of 17 hours per month on development activities, adding up to 150 hours per year. They further concluded that this investment of time was matched by a sizable investment of money, with school districts' budgets for teacher support and development two to four times the size of comparable industries. And yet, in research and practice literature spanning decades, teachers have found the bulk of these hours less than helpful and the bulk of this money not well spent (Calvert, 2016; Johnson, 1990; Smylie, 1989).

As discouraging as these findings are, though, they likely do not tell the whole story. Considering the massive amount of time teachers spend in PD, it would be hyperbole to suggest that *all* of those hours are unhelpful. Take, for example, Webster-Wright (2010), who situated her study of professional learning among therapists in a discourse about professional learning across domains (including teaching) and who found a gap between professional rhetoric about PD and professionals' experiences of learning. Her participants generally described PD as irrelevant, but when asked about experiences in which they *had* learned something they offered rich descriptions of authentic and powerful professional learning. Given this apparent dissonance, what might we learn from teachers' stories about the conditions under which they learn? Why do some professional learning experiences resonate when others fall flat? And how do teachers' perceptions of powerful PD differ from their

perceptions of PD so bad they would like never to repeat it?

To answer such questions, I probed the subjective and varied experiences of teachers' learning, focusing on their most powerful learning experiences (PLEs) and contrasting negative learning experiences (NLEs). In so doing, I relied on a finding well-grounded in cognitive and learning science (e.g., Ames, 1992; Shernoff & Csikszentmihalyi, 2009), which is that learners' perceptions of learning experiences — positive or negative — have important implications for uptake and transfer. In other words, learners who view a particular learning experience positively might be more disposed to attend to the content and ideas presented in that learning experience and to apply these ideas to practice. Thus, a better understanding about what makes professional learning experiences powerful could help inform efforts to improve teacher practice.

In this paper, I focus on one pattern across teachers' accounts that seemed to distinguish powerful learning experiences from negative learning experiences: teacher agency. Given the range of decisions teachers confront daily and given increasing constraints on their autonomy, agency over one's professional learning may seem like a relatively minor enactment of agency, but a closer examination of these learning experiences shows agency to be a dynamic and multi-dimensional concept. In particular, I propose three dimensions of teacher agency in PD: agency *over*, agency *during*, and agency *emerging from*. Agency *over* PD was evident when teachers opted into a learning experience or chose one learning experience over another. But in addition to this, learning experiences may have been structured in a way that allowed teachers to exercise agency *during* their PD – for example, redirecting a conversation to address their specific learning needs or problem solving a dilemma with their peers. Finally, as noted above, many teachers would admit that PD does not always lead them to make meaningful or lasting instructional change; however, when they do make

substantive change to their practice teachers may be exercising agency that *emerged from* PD, choosing to approach their work in a new way based at least in part on what they heard, saw, or experienced. Each of these forms of agency was well documented in PLEs and relatively sparse (though not absent entirely) in NLEs shared as part of this study. In the pages that follow, I further explore the nature of teacher agency in professional learning and use it as an analytic lens to better understand teachers' motivations and learning needs. In so doing, I discuss implications for improved professional learning as well as a more nuanced view of teacher agency itself.

Literature Review

Intuitively, agency is the individual capacity to make autonomous decisions and to act on those decisions. Such a view of agency is consistent with the long-held “occupational norm of autonomy” in teaching (Coburn, 2004, p. 234), which has given teachers considerable control over individual instructional practices (cf. Lortie, 1975/2002). Although the terms agency and autonomy are similar and overlapping, in this thesis I distinguish between them in part by their scope and by the empirical domains in which they have been most authoritatively conceptualized. By this standard, autonomy – discussed in Chapter II – falls within the domain of psychology and is best applied toward understanding individuals' behavior and the alignment of their behavior with their internal sense of themselves – specifically, satisfaction of their basic needs (e.g., Deci & Ryan, 1985, 2000).⁴⁵ Deci and Ryan (2000) defined autonomy – as with the other basic needs of competence and relatedness (see Chapter II) – in individual terms, calling it “the organismic desire to self-organize experience

⁴⁵ I do not mean to suggest that psychology is the only discipline that has sought to define autonomy, but it is the one most pertinent to the topic of professional learning in education. In addition to psychology, autonomy has also been well specified and roundly debated in the disciplines of philosophy and political science (see Calhoun, 2002).

and behavior and to have activity be concordant with one's integrated sense of self" (p. 231). Such a view focuses on the alignment between individuals' behavior and their identity, but it does not account well for the ways in which this alignment may shift over time or across contexts.

Sociological and anthropological conceptions of agency, on the other hand, situate individuals' motivations, behavior, and identity within unique contexts and in response to forces external to the self. Emirbayer and Mische (1998) suggested that individual exercises of agency reflected a tying together of one's past experiences, aspirations for the future, and calculations of risk and reward in the present.⁴⁶ Other views sought to account for the ways in which individuals' agency was enabled or constrained according to the explicit and implicit rules of the groups to which they belong (Holland, Lachicotte, Skinner, & Cain, 1998) or the institutional power structures to which they are beholden (Campbell, 2009). On a practical level, the political scientist Lipsky's (1980/2010) notion of "street-level bureaucrats" or the economist Hirschman's (1970) "exit, voice, and loyalty" are both schematics used to explain individuals' agentic behavior situated within particular disciplinary and organizational contexts. Summing up this view, Biesta, Priestley, and Robinson (2015) observed that agency was "a quality of the *engagement* of actors with temporal-relational contexts-for-action, not a quality of the actors themselves" (p. 626; emphasis in original).

Within research focusing on *teacher* agency specifically, there appeared to be general agreement that the policy context and conditions under which teachers worked — for example, high-stakes accountability pressures related to curriculum standards or teacher evaluation — had a negatively constraining effect on teacher behavior, beliefs, and identity.

⁴⁶ In this vein, Emirbayer and Mische (1998) identified three temporal dimensions of agency corresponding to one's past (*iterational*), future (*projective*), and present (*practical-evaluative*). In this study, I focus on an alternative conception of agency, but I note Emirbayer and Mische's dimensions because they recur in multiple recent studies of teacher agency (e.g., Biesta, Priestley, & Robinson, 2015; Bridwell-Mitchell, 2015).

In a study of Scottish teachers implementing curriculum reform designed to boost teacher autonomy, Biesta, Priestley, and Robinson (2015) were dismayed to find that teachers' beliefs about their students, teaching, and the purposes of education were persistently rooted in the technical discourse of policy implementation. As a result, they concluded that "such narrowness of vision and purpose limits and delineates teacher agency" (Biesta et al, 2015, p. 637). Relatedly, in Australia, lamenting what she perceived as an increasingly bureaucratically managed teaching profession, Sachs (2001) observed that "[w]hen teachers do act autonomously their behaviour is often sanctioned by their employing authorities" (p. 155). Finally, in the US, Buchanan (2015) found that even as teachers exercised agency within their school contexts the structures of accountability policies — like high-stakes standardized tests — were dominant. Citing Giddens' theory of structuration, by which societal structures constrain roles and identities, which in turn lead individuals to act in ways that align with the structures, she concluded that teachers "not only alter[ed] their instructional practices to meet the accountability demands, but they also [saw] achievement on standardized exams as a marker of their own success" (Buchanan, 2015, p. 712). In each of these cases, Campbell's (2009) distinction between two parallel conceptions of agency could be useful in interpreting teachers' capacity to appear to act with agency while also being constrained by the policy context: "we have one conception that simply emphasizes the ability of individuals to implement their will, while a second stresses the individual's ability to do so against resistance" (p. 409). According to this view, the social structures constraining teachers may be more powerful than their individual capacities to resist, resulting in individual agentive acts that nevertheless fail to fundamentally alter the context.

And yet, despite these apparent constraints, teachers do still exercise agency in myriad ways. Holland et al. (1998) wrote that "[h]uman agency may be frail, especially among

those with little power, but it happens daily and mundanely, and it deserves our attention” (p. 5). Indeed research on teacher agency has been wide-ranging, examining teachers’ responses to new curriculum standards (Priestley, Edwards, Priestley, & Miller, 2012), prescribed instructional practices (Bridwell-Mitchell, 2015), and the decision about whether and where to continue teaching (Johnson & Birkeland, 2003). Until recently, though, teacher agency as a lever for improving professional development has received scant empirical or policy attention. Biesta et al. (2015) idealistically suggested that continuing education for teachers could be used to press a more “robust professional discourse” oriented toward “the wider purpose and meaning of schooling” (p. 638). Such PD, they argued, could over time lead teachers to adopt a more expansive and imaginative view of the profession and their potential futures within it, thus motivating them to demand and engage in additional agentive behaviors. More practically, Calvert (2016) – writing for the professional learning association Learning Forward and the National Commission on Teaching and America’s Future – suggested that teachers able to exercise agency could more “constructively ...direct their professional growth and contribute to the growth of their colleagues” (p. 4). That said, she conceded that teacher agency related to PD was “not a dichotomous, all-or-nothing proposition in which teachers are either fully engaged or completely disengaged in their learning” (Calvert, 2016, p. 4). Rather, agency varied according to individual teachers’ learning needs and motivations and the systemic structures that supported or limited agency.

In this paper, I apply the lens of teacher agency empirically to professional development. In particular, I use agency to draw a contrast between teachers’ accounts of powerful and negative learning experiences. Moreover, I seek to extend the conceptual understanding of teacher agency itself to include not only the choice to engage or disengage in a learning experience – what I am calling *agency over* – but also teachers’ agentive behaviors

during PD and *emerging from* PD. By recasting teacher agency in PD as a multi-dimensional concept, I can more precisely examine the contrast between powerful and negative learning, first looking across dimensions of agency and then again within discrete learning experiences. Specifically, I address the following research questions:

1. To what extent is each dimension of agency – agency over, during, and emerging from PD – evidenced in teachers’ accounts of powerful and negative professional learning?
2. What are the design and policy implications of a multi-dimensional conceptualization of teacher agency for professional development?

Methods

Previous theoretical work has urged the reconceptualization of professional development in order to produce research that better reflected participants’ experiences and thus could lead to more relevant implications for practice. In designing the present study, I drew on insights from two of these alternative perspectives. In framing PD as a complex and nested phenomenon in which the learners’ orientations interact with the learning needs of the system, Opfer and Pedder (2011) saw variation as an endemic feature of teacher learning, noting that their dynamic conceptualization of PD assumed “many different ways of achieving the same learning effects” (p. 394). In seeking out teachers’ accounts of powerful professional learning, I deliberately did not limit teachers’ accounts to those of school- or district-initiated PD, preferring instead a wide range of possible interpretations of “professional learning.” Similarly, heeding Webster-Wright’s (2009) call for research investigating “the lived experience of learning as a professional” (p. 728), I sought to elevate participants’ perspectives over my own and eschewed a familiar approach in which the

researchers chose well-regarded PD programs to study (e.g., Borko, 2004; Wilson & Berne, 1999). Instead, I opted to have teachers select from the full range of their PD experiences those that were most memorable and meaningful to them. Throughout my research design and analysis, I sought to demonstrate, as one of my participants urged, “respect for the anecdotal.”

The present study is a phenomenological inquiry, defined by Creswell (2013) as one that “describes the common meaning for several individuals of their *lived experiences* of a concept or phenomenon” (p. 76; emphasis in original). To analyze perceptions of the shared phenomenon of professional development, I conducted semi-structured interviews with 25 teachers in which they reflected in-depth on a powerful learning experience (PLE) and what set these experiences apart from a notably negative learning experience (NLE). Given that the impact of any learning experience is often only evident with the benefit of time and the application of new ideas to practice, post-hoc interviews enabled participants to consider possible connections between professional learning and its impact on practice.

Participant Recruitment

Employing a purposeful stratified sampling strategy (Patton, 2002), I recruited teachers from five adjoining school districts in the northeastern United States. The districts varied by resource levels, student demographics, and student achievement, and the teachers within my sample varied according to grade level taught and years of experience. I limited recruitment to currently practicing educators in non-charter public schools who had been teaching for a minimum of three years. I sought to recruit a sample stratified according to grade level taught (primary and secondary) and years of experience (between 3-5 years and 6

or more years).⁴⁷

Bearing these restrictions in mind, I enlisted colleagues with the ability to reach out to large numbers of teachers — for example, district administrators or union leaders — to send an email invitation on my behalf, thus enhancing my ability to recruit a sample more representative of the teaching population as a whole than if I had relied solely on personal and professional “word of mouth” recruitment. Such broad recruitment proved initially effective, but did not result in a desirable sample size. I then leveraged professional contacts with connections to specific school leaders or teachers within the target districts. I began recruiting participants in July 2014 and ended recruitment in October 2015, although most recruitment happened during the first two months of the 2014-2015 and 2015-2016 school years, a time when teachers were neither under pressure associated with the ends of marking periods or high-stakes tests nor on vacation.

Sample

As noted above, my final sample consisted of 25 teachers in five districts in the northeastern United States.⁴⁸ There were more women than men (20 and 5, respectively), more elementary and middle school teachers than high school teachers (also 20 and 5, respectively), and more experienced teachers (6 or more years) than novice teachers (19 and 6, respectively). I did not ask teachers to self-identify their race or ethnicity. With the exception of grade level — which nationally is evenly split between K-8 and high school teachers — trends in my sample reflected national trends, in which 76.3 of the public school teaching force is women and more than 60 percent have been teaching over 10 years

⁴⁷ I justified the cut-off between newer and more experienced teachers based on a report estimating that close to half of new teachers leave the profession within 5 years, marking the completion of five years as an important milestone in the lifespan of a teacher’s career (Alliance for Excellent Education, 2014).

⁴⁸ The names of all teachers in this paper are pseudonyms.

(National Center for Education Statistics, 2014). All of the districts except one had proportions of economically disadvantaged students that exceeded the statewide average. See **Appendix A** for a summary of district demographics and teacher characteristics within my sample.

Data Collection

I used a modified form of in-depth interviewing as a way for participants to “reconstruct and reflect” on a powerful professional learning experience (Seidman, 2006). Focusing on a single experience with each participant allowed me to account for the unique context in which learning occurred. To this end, I also asked participants to provide background and brief comparison cases by outlining their beliefs related to teacher improvement and describing a professional learning experience that they “would like never to have again.” For the full protocol, see **Appendix B**. Interviews lasted between 45 and 90 minutes. In addition to transcribing interviews in full, I drafted context memos immediately following each interview in which I recorded my observations of where the interview took place and the participant’s demeanor; reflected on my own role in our conversation and how I may have influenced the story; and considered how their story resonated with or challenged accounts from other participants. These memos served as important additional data sources.

Data Analytic Strategy

For this study, I analyzed 40 professional learning experiences — 25 powerful learning experiences and 15 negative learning experiences.⁴⁹ During multiple rounds of

⁴⁹ I had fewer NLEs than PLEs for two reasons. First, I added formal questions to my interview protocol about NLEs after I had already interviewed six participants. Some of these early participants volunteered

descriptive coding (Saldaña, 2013), I noted recurrent themes and drafted thematic memos in which I highlighted similarities and differences across participants and drew connections between my data and relevant literature. The focus on teacher agency in this paper emerged from these thematic memos.

Throughout iterative rounds of coding and thematic analysis, I first assessed the overall presence or absence of a conventional, binary view of teacher agency: namely, whether participants were able to exercise agency over their choice of PD. In each interview, I asked teachers to report whether their professional learning experiences were elective or required, and their responses to this question were an obvious starting point for categorizing agentive and non-agentive experiences. However, as my analysis progressed – and as I considered teachers’ responses in light of school and district requirements for PD hours – I recognized that my either/or phrasing of this question reflected a false binary. Viewed from one perspective, the vast majority of professional learning experiences – including ones that participants self-reported as elective based on, say, their choosing them from a catalogue of district-prescribed options – could be similarly interpreted as required insofar as they counted toward district- or state-mandated minimums of PD hours needed to maintain licensure.⁵⁰ In addition, some experiences occurred as part of required school-based

information about contrasting negative experiences. These intriguing but half-formed stories contributed to my decision to revise the interview protocol, so that I could systematically collect information about NLEs. Second, among participants who did respond to questions about NLEs, a few offered overly general accounts ill-suited for comparative analysis. For an index of all PLEs and NLEs, see **Appendix C**.

⁵⁰ State mandates for teacher PD can be extensive. For example, to renew a standard teacher license in Massachusetts, teachers must accumulate 150 professional development points (PDPs) over five years. Regulations do not require specific programs, but they do prescribe content areas. New regulations in 2016 include the following: 15 PDPs related to “SEI or English as a Second Language”; 15 related to “training in strategies for effective schooling for students with disabilities and instruction of students with diverse learning styles”; 90 in subject content area (at least 60 of the 90) or general pedagogy. In addition, many teachers are required to hold multiple licenses (e.g., primary content area, special education, ESL) and thus are required to pursue “an additional 30 PDPs in the content area” of each license. Moreover, 80% of proposed PDPs in each teacher’s Individual Professional Development Plan “must be consistent with the educational needs of the school and district improvement plans” (Department of Elementary and Secondary Education, 2015, p. 9).

structures like grade-level meetings or formal mentoring relationships, even though participants interpreted them as elective based on their control over the learning content. For this reason, I decided to further parse the concept of agency. Agency *over* described participants' control over opting into or out of a professional learning experience – the broad and binary view with which I began my analysis. Agency *during* described participants' exercising control over learning content or shaping the nature of their participation. And agency *emerging from* further recognized that learning and action may extend beyond the discrete boundaries of any single PD and lead teachers to make choices they might not otherwise have been able to make.

With these distinctions in mind, I re-scanned codes pertinent to each dimension of agency and made informed determinations about the presence or absence of each dimension within each learning experience. Analyzing trends across my sample, I noted two patterns. First, looking across each dimension of agency, I found them to be more evident in PLEs than in NLEs; and second, I found that individual powerful learning experiences tended to have a greater concentration of agency – in terms of the number of dimensions evident in any one learning experience – than negative learning experiences. Having observed these trends, I then examined teacher meaning-making and their explanations for why they perceived the experiences the way they did and, when they exercised agency, the motivations underlying their choice. I drafted additional thematic memos in order to compare accounts across participants, gradually converging on the interpretive patterns within PLEs and NLEs that I discuss below. Finally, in order to surface and represent divergent voices, I considered the anomalous cases of NLEs in which teachers exercised dimensions of agency.

Limitations

I acknowledge potential limitations of this study. First, my data are cross-sectional and thus unable to fully account for the nuance of teacher agency nor the ways that agency may evolve over time or vary across contexts. Moreover, given the exploratory and descriptive nature of this study, it was not possible to determine whether an association existed between the number of opportunities for agency within a learning experiences and the strength of teachers' positive or negative perceptions toward that learning experience. This would be ripe terrain for future research.

In addition, the retrospective self-reported nature of the data – while essential for answering the questions specific to this study – also had limitations. In particular, self-reports may have been colored by participants' biases or blurred by the haze of memory. Ethnographic research tracing teachers' experiences of agentive professional learning over time and using a combination of observation and reflective interviews could help minimize these biases. Relatedly, as someone who has both facilitated and participated in teacher professional development myself, I acknowledge that I came to this study colored by my own experiences and biases (Peshkin, 1988).

To help mitigate researcher subjectivity bias, when collecting data I took steps to reflect on and then “bracket” my personal experiences and beliefs (Creswell, 2013). Similarly, I offered “member checks” to participants, allowing them to view copies of their transcripts and clarify their stories if they felt they had not adequately represented their own experiences (Creswell, 2013). Those who did examine their transcripts made no changes. Finally, my sample size was large enough to capture some variation while also suggesting some clear patterns, but it remained very small relative to population of teachers who experience professional learning. Further research, potentially using quantitative surveys either alone or

as part of a mixed methods study, could be used to examine the presence and application of teacher agency in a larger sample.

Findings and Discussion

In the sections that follow, I first analyze agency trends throughout my sample, looking across dimensions and by types of learning experiences. I then examine the dimensions of agency within discrete powerful and negative learning experiences. In many ways, confirmation of agency in powerful learning is intuitive. It is perhaps unsurprising that teachers who feel that they have some control related to their own learning experience would be disposed favorably toward it. This seems especially true of agency *over*, the more conventional and binary view of agency in PD. Therefore, while I briefly discuss agency over powerful PD and teachers' motivations for the choices they made, I focus my analysis of PLEs more in-depth on the other two dimensions – agency during and agency emerging from. During PD, teachers exercised agency in numerous ways – for example by co-planning, volunteering for activities, and taking on leadership roles within the PD itself. Emerging from PD, teachers exercised agency to reinvent their professional identities, transform their curriculum, and assume leadership among their peers outside the PD.

Turning to the anomalous cases of agency within negative learning experiences, I observed the ways teachers used agency to reframe or reinterpret NLEs. Negative learning experiences *over* which participants had at least some degree of agency would likely be universally recognized as simply regrettable choices. Teachers participating in these experiences believed that they would be valuable, but they were disappointed – sometimes bitterly so – in what they found. In addition, teachers who exercised agency *during* their NLEs could be seen as engaging in sometimes subversive behavior in that they were

Table 4.1. Teachers’ reports of agency, by agency dimension and type of learning experience.

	over	during	emerging from
PLEs (n=25)	20	21	23
NLEs (n=15)	3	3	2

unnerved or concerned by something they were seeing or hearing and sought – with some success – to improve the experience for themselves or others without fundamentally altering their subjectively negative perceptions. And teachers who reported agency *emerging from* NLEs were teachers able to find the silver lining in experiences that otherwise stood out for their negative qualities.

Multi-Dimensional Teacher Agency in Professional Learning

In general, teacher agency across the 40 total learning experiences analyzed in this study tended to concentrate within powerful professional development. This was true across all three dimensions of agency. As shown in **Table 4.1**, 20 of the 25 PLEs included agency *over* while only 3 of the 15 NLEs did. Similarly, 21 teachers reported exercising agency *during* their PLEs compared to 3 of 15 teachers who reported exercising agency during their NLEs. Finally, 23 teachers recalled making substantive changes *emerging from* their PLEs; only 2 teachers said the same about their NLEs. Notably, the higher numbers for agency *during* and *emerging from* relative to agency *over* suggested that some teachers were able to exercise agency related to PLEs that they did not choose. In addition, even though each dimension of teacher agency was *more* evident in PLEs, they were not absent from NLEs. Indeed, as noted above, these seemingly anomalous experiences were notable in their own right, each of them seeming to capture distinct interpretations of and responses to professional learning.

Turning to the concentration of each dimension of agency within discrete powerful and negative learning experiences, PLEs appeared more likely to offer teachers *multiple*

Table 4.2. Comparing concentrations of teachers’ reports of agency, by number of dimensions evident and type of learning experience.

	Number of agency dimensions evident in a single learning experience			
	0	1	2	3
PLEs (n=25)	0	1	9	15
NLEs (n=15)	9	4	2	0

opportunities and outlets for exercising agency. (See **Table 4.2** for a comparison of teachers’ reports of agency within powerful and negative learning experiences.) All 25 PLEs evidenced at least one dimension of agency, and 24 of the 25 PLEs evidenced two or three. In contrast, agency was less concentrated in negative learning experiences, with 9 of 15 NLEs showing no evidence of any dimension of agency. Four NLEs evidenced one dimension of agency and two other NLEs evidenced two dimensions. Considering these concentrations, the multi-dimensional view of teacher agency is instructive in two regards. First, it helps to make clear that powerful learning experiences are not merely characterized by agency but rather by *repeated opportunities* for agentic behaviors. Relatedly, analyzing multiple dimensions of agency suggests distinct patterns in the ways teachers sought to reframe or reinterpret their most negative learning experiences.

Agency in Powerful Professional Learning

Given the highly individual nature of learning, teachers’ motivations for exercising agency *over* PD were understandably varied, but among powerful learning experiences many teachers expressed a desire for practical knowledge. In line with the findings of researchers like Johnson (1990), teachers often described their PLEs as ways to pursue topics of interest or to troubleshoot their most pressing problems of practice. In so doing, teachers’ agency *over* their choice of PD was critical toward ensuring that the content was relevant and that the work they did could translate to their practice. Fran, an experienced elementary teacher

at a full-inclusion school, contrasted her and her co-teachers' experience redesigning their science curriculum thanks to a small grant from the Fund For Teachers with a typical school-based PD⁵¹: "There's a difference between a mandated type of professional development... you know, information overload... and then when we had the opportunity to *design* our professional development. ... We knew the curriculum, and so we designed something that we knew were weak in, that we wanted to enhance. That was the big difference." Similarly, Trisha, a fourth-year fifth and sixth grade teacher of English language arts and social studies, volunteered for a year-long certification training with the Wilson Reading System to fortify an aspect of her teaching that she knew was under-developed: basic phonics instruction. "I grew up with whole language," she explained, "so even in my own educational process I didn't have phonics instruction... And I kept getting students in fifth and sixth grade who were reading first, second grade reading level, and I didn't feel like I had the skill to support them."⁵²

Importantly, though not captured in most of the accounts in this study, agency *over* PD should be understood not only as the ability for teachers to opt *in* to learning experiences they expect would be valuable, but also the ability to opt *out* of learning experiences that they did not perceive (or no longer perceived) as meaningful. One teacher who underscored this point was Vicky, a fifth grade teacher discussed in more detail below. Vicky spoke passionately about her PLE – a long-running, teacher-led reflection group with a core group of colleagues – but she was also careful to concede that this group that had so

⁵¹ For more about Fund For Teachers, see the discussion of autonomy in Chapter II.

⁵² Trisha's reference to phonics and whole language reflected a dichotomy characterizing the "reading wars," a long-running and at-times heated scholarly debate about the relative efficacy of two distinct methods of reading instruction. As Kim (2008) documented, the well publicized failure of "whole language" curriculum reform in California during the 1980s and 1990s seemed to tilt policy scales in favor of phonics, but a careful study by the National Research Council in 1998 followed by a comprehensive review of quasi-experimental research by the National Reading Panel in 2000 concluded that reading instruction incorporating elements of *both* whole language and phonics was preferable.

influenced her identity and practice was not well-suited to everyone. She explained:

[D]espite the fact that I deeply love this [group]... I don't think it has applications for everybody. Because we've had people coming in and out through different years and there's definitely been a lot of people who felt like, "Yeah, it gets too heady, I want something more practical." ...So, I feel like it's been really enriching for me and we talk often as a group about how it's really enriching for all of us, but it doesn't seem like it has necessarily a lot of applications for everybody, because they don't really fit with everybody's professional interests.

Vicky's observation is an instructive reminder that teachers' agency *over* their PD, when available, may be used quite differently to respond to teachers' unique beliefs and learning needs.⁵³

As important as making the right choice of PD may be for teachers getting their learning needs met, it is not the last, best, or only opportunity they have to make a learning experience meaningful. In addition to the 20 teachers who exercised agency over their PD, 21 of the 25 teachers in this sample shared powerful learning experiences *during* which they exercised agency. Agency *during* PD could – and did – take many forms, but fundamentally each of these forms seemed to reflect various ways that teachers took responsibility for their own learning. Theoretical and empirical literature has referred to this type of learning by many names, including problem-based learning (Savery, 2015), student-centered learning (Nave, 2015), and self-directed learning (Merriam, 2001), among others. Similarly and pertaining to professional development in particular, Garet et al.'s (2001) framework for effective professional development identified "active learning" as one of six defining features of effective PD and defined it as being "actively engaged in meaningful discussion, planning,

⁵³ For a more in-depth exploration of the relationship between teachers' unique perspectives and their perceptions of professional learning, see Chapter III.

and practice” (p. 925).

Chelsea, in her second year as a K-8 inclusion coach and a former special education teacher for over 15 years, was looking for several things when she enrolled in a district-offered week-long course on “Facilitative Leadership”: practical skills for working with adult learners, a community of peers, and a mentor. Led by a former teacher and district administrator named Gene Thompson-Grove, the course was structured in several ways that enabled participants to direct their own learning. One way that stood out to Chelsea was a survey given to teachers before the course asking them what they were “hoping to get out of” the week. This kind of polling – formal or informal – is not necessarily unusual in PD, but unless the results of the polling change the direction of the PD itself it may seem merely pro forma and less than authentic. In this case, Chelsea was struck by Thompson-Grove’s transparency. On the first day of the course, she shared the full results of the survey, so that all participants could see that their own opinions were heard as well as what their peers wanted. In addition, Thompson-Grove made clear how the workshop would be different from previous iterations based on this early feedback. For Chelsea, this was an example of the facilitator “knowing the landscape” of who was in the group.

During the week, Chelsea and the other participants had multiple opportunities to practice what they were learning, all voluntarily. At first, as someone new to the district, Chelsea remembered feeling like “the smallest fish in the pond ... So I was learning by watching.” After a short time, though, she volunteered to present a dilemma to the group using a protocol, a structured process for discussion and reflection (see McDonald, Mohr, Dichter, & McDonald, 2007). Facilitated by Thompson-Grove, the experience was “transformative” for Chelsea. Even though she volunteered, she felt initially nervous to share her dilemma – candid concerns about how to navigate the personal politics of her job

and the district – but her risk-taking was quickly validated. Indeed, the decision to volunteer for this activity fundamentally changed the learning experience for Chelsea. Coming into the workshop, she felt isolated, unsure of her role and how best to navigate the system. By agreeing to be vulnerable in front of her peers, she received what Little and Horn (2007) called “normalizing” responses designed to “supply reassurance (‘you’ll be fine, don’t worry’) and establish solidarity (‘it happens to all of us’)” (p. 81). Looking back, Chelsea considered how her sense of herself and her work might have been different if she had not volunteered to present her dilemma. For one thing, she concluded, she would not have received the reassurance and feedback she got from her peers. And “if I didn’t get that feedback,” she said, “I do wonder if I’d still be wondering, ‘Is it just me?’”

In Chelsea’s experience (and the experiences of other teachers in this sample), agency was only one of many design structures that contributed to her positive perceptions, but among these features agency acted as an important *gateway*, allowing her to more fully engage in her own learning than she might otherwise have done. For example, Thompson-Grove made many apparent design choices and facilitation moves that were critical to Chelsea’s warm feelings toward Thompson-Grove, her peers, and her own learning. Chelsea acknowledged that in order for participants to ask for and provide candid feedback to each other it was necessary to have a climate of deep trust, and she remembered “some exercises and deliberate moves on Gene Thompson-Grove’s part to build that trust.” These included sharing personal stories herself, making a lot of time for people to talk in pairs and get to know each other, using discussion prompts about courage and overcoming obstacles, and repeated reminders about norms. All of these features contributed to Chelsea’s choice to participate the way she did, leading to the words of support and affirmation from her peers that were so meaningful. But these words – and the confidence they engendered – emerged

as a direct result of her *choice* to participate in the way she did.

Underscoring the importance of relationships, Miriam, the lone ESL teacher in a K-8 school and still a relative novice in her fifth year, was unique among teachers in this sample in that her PLE was an ongoing professional relationship with one of her peers. Specifically, Miriam described her relationship with her school's literacy coach. During her first year, the literacy coach was assigned to Miriam as a formal mentor, and the two of them met on a regular schedule with a set of suggested topics and questions. In this sense, Miriam did not have agency *over* the relationship, but as the relationship evolved Miriam found herself continuing to initiate conversations. What continued to make the relationship a powerful source of learning for her, she said, was the fact that she was "in control." Still an eager student, she was now directing the course of their conversations. "I have a need, I can seek her out and she can respond to that," she explained. Just as there were design structures and facilitation moves in Chelsea's course with Gene Thompson-Grove that eased her decision to participate, there were also features of Miriam's relationship with her coach that enabled her to exercise a fuller degree of agency. For example, Miriam pointed to the formative but non-evaluative nature of the relationship. For her formal evaluation, she often felt pressured to perform in a way that inhibited her ability to ask for authentic feedback and induced a self-consciousness with the mistake-making she understood as important for improvement. In contrast, with her coach – a woman who did not evaluate her – Miriam felt safe to ask questions that revealed her uncertainty and made her vulnerable (much like Chelsea felt in her PLE when she volunteered to present a dilemma). The authentic uncertainty Miriam felt when approaching her coach helped to shape conversations that in turn laid the "foundation for individual professional learning and collective capacity for improvement" (Little & Horn,

2007, p. 82).⁵⁴

Both Miriam and Chelsea used agency during their powerful learning experiences to direct attention toward their learning needs. In the process, they “took a risk,” to use Chelsea’s words, and made themselves vulnerable in front of their peers. But this would seem to suggest that the agency they exercised may have depended in part on the extent to which they perceived a high degree of trust within their learning communities. Not all professional development experiences – or schools, for that matter – are comparably “safe” for uncertainty and learning. In this sense, trust may be understood as ancillary to agentic learning environments in the same way that relational trust in schools served as a foundation for sustained instructional improvement (see Bryk & Schneider, 2002).⁵⁵

Teachers in this study who exercised agency *emerging from* their powerful learning experiences extended their learning in a number of ways. In addition to the instrumental ways that teachers extended their learning – for example, Fran redesigning her science curriculum or Trisha adopting the Wilson system for teaching reading – several teachers emerged from their PLEs with an expanded sense of their professional responsibility and sought to be “multipliers.” That is, they found opportunities for others to learn what they learned and to experience what they had experienced. Michelle, 14-year high school English teacher first introduced in Chapter II, was catalyzed by a series of workshops and coaching sessions with Maryann Cucchiara, a consultant and formerly the Director of Research and Development for English Language Learners with the New York City Department of Education (NYCDOE). In her role at NYCDOE, Cucchiara collaborated with Lily Wong Fillmore, a linguist and professor emerita from the University of California at Berkeley, to

⁵⁴ For a portrait of a school working to integrate organizational norms structures that viewed safety, uncertainty, and mistake-making as vital for learning and improvement, see Noonan (2014a).

⁵⁵ As I discuss below, some teachers *did* exercise agency during NLEs not characterized by trust, but it seemed to be of a distinct and more subversive quality.

develop instructional strategies for helping students – especially English language learners – deepen their understanding and facility using academic language (Fillmore, 2014). After repeated exposures to Cucchiara’s presentations and strategies, extending over more than two years, Michelle came to see them as her own and used her role as a grade-level facilitator to enlist colleagues in a self-study of how they taught academic language. She and one of her colleagues then presented their work at a whole school PD. As a member of her school’s leadership team, Michelle had a chance to review teachers’ evaluations of school-based PD and she noted that “a couple of teachers referenced our presentation . . . as one of the powerful learning experiences that they had had. Just like seeing how something works in practice. So that was like, ‘Oh wow.’ Like that sort of worked, and it was great to know that we were sort of helping some other folks.” In addition, Bonnie, a first grade teacher for seven years also introduced in Chapter II, attended a training with Gene Thompson-Grove in which she learned to lead Critical Friends Groups (CFGs) (Curry, 2008; Kuh, 2016), and then went on not only to co-facilitate CFG leader trainings with Thompson-Grove but started a weekly drop-in CFG specifically geared toward early childhood teachers.

But one of the best illustrations of the reciprocal learning and teaching emerging from powerful PD may have been Ruth and her colleague Vicky, a nine-year fifth grade teacher in Ruth’s school. Briefly, Ruth’s PLE more than a decade earlier inspired her to start an ongoing professional learning group (PLG) at her school to help her consolidate and sustain what she learned from her PLE. Notably, Ruth only mentioned this group in passing during our interview, but two weeks later I spoke to Vicky. Vicky first joined the PLG founded by Ruth in one of her first years teaching and her professional identity and practice had been profoundly shaped by it.

Ruth’s PLE was a months-long teacher seminar with Making Learning Visible

(MLV), a program of Project Zero at the Harvard Graduate School of Education. Originating as a joint study of early childhood education in Reggio Emilia, Italy (see Giudici, Rinaldi, & Krechevsky, 2001), MLV continued as a series of teacher seminars in the US with a conviction that the lessons of Reggio-inspired education could be used to improve “all schools” (see Krechevsky, 2012; Krechevsky, Mardell, Rivard, & Wilson, 2013). Not long after learning about MLV, Ruth and a colleague from her school joined a cohort of preschool through high school teachers who were documenting and reflecting on their work through small and large group discussions (Krechevsky, 2012). Ruth remembered three “through-lines” that grounded the MLV seminar: a focus on individual and group learning, documentation, and “culture, values, and democracy.”⁵⁶ The conversations and activities in the seminar — especially those focused on the first through-line of individual and group learning — reinforced Ruth’s beliefs about reflection being essential for instructional improvement. In particular, the seminar discussions prompted a question that transformed the way Ruth thought about herself and her teaching and which she admitted being “stuck on” for years: “Who was the teacher in the group?” She explained that it was a question that made her “think about everybody in the room being part of the group, which I hadn’t really before. I’d been thinking, ‘Well, I’m the teacher and they are the kids.’ And really rethinking who is in that group and I am a part of the group and how am I a part of that group? I puzzled over that for years.” As a result, she said she learned to think more collaboratively about many aspects of her teaching — from content and grading to pacing — and giving students more of a voice in decision making. “When I started to think about myself, like in

⁵⁶ The concept of “through-lines” — a term of art borrowed from Stanislavsky (1969) — was originally developed as part of Project Zero’s Teaching for Understanding framework (Blythe & Associates, 1998), which defined them as “overarching understanding goals,” questions or statements that “specify what we want our students to get out of their work with us over the course of a semester or year” (p. 36). The through-lines of MLV have evolved somewhat over time, but the three themes recalled by Ruth have been consistently foundational (Krechevsky, personal communication).

what ways am I part of the group, [group learning] became more important to me,” she said, adding that it was also “a lot more fun.”

Returning to her school, Ruth believed that she would need more colleagues to “to talk with” about the ideas and epiphanies emerging from the MLV seminars. As a result, Ruth actively sought to make her school a place in which she could safely and collaboratively pursue questions about group learning, launching an affinity group of teachers loosely based on the “through-lines” of MLV as she understood them. Although the group rotated members and occasionally changed formats, it had been continuing more or less uninterrupted for nearly 10 years. Moreover, the ideals of MLV that were so influential for Ruth also seemed to have taken root for Vicky, a novice teacher when she first joined the PLG and who spoke about it at length for this study.⁵⁷ Recalling what made the MLV learning environment so powerful, Ruth said, “one of the best norms was ‘care as much about others’ learning as your own.’ That’s like, that’s one of the best norms I know.” Two weeks later, reflecting on the learning environment of the MLV-inspired group Ruth started, Vicky confirmed, “it’s usually one of our school norms in most meetings -- to value the learning of other people -- but I distinctly *feel* it in that group.”

In starting the PLG, Ruth had been seeking to extend her own learning, acting as a “multiplier” for the MLV experience. In the process, she enlisted others, like Vicky, to be multipliers, too. At the beginning of each school year at a whole school meeting, teachers would “give a quick pitch” for the year’s PLGs – groups organized around a central theme

⁵⁷ Ironically perhaps, given how influential the experience came to be in shaping her professional identity and practice, Vicky’s first encounter with the MLV group was the result of a misunderstanding. She explained, “We used to have a professional day in either October or November, where you would sign up for one thing, and Ruth was leading Making Learning Visible. And at the time I thought it was about making bulletin boards and I’d kept getting feedback [that my] bulletin boards were horrible and I was like, ‘This is great. My learning is so invisible!’ ...And you know my principal was like, ‘I’m really glad you’re going because there’s nothing on your walls,’ so I think she may have misunderstood it too.” Vicky then added, “I’m still horrible at bulletin boards. I have not gotten better at that. There are a lot of ways that I’m good at documenting practice, but bulletin boards are the worst in my classroom.”

or question – and then everyone would sign up for one and commit to meeting with that group bimonthly throughout the year. Each year, the same core group of MLV-associated teachers convened a PLG, and as one of the group’s longest-standing members Vicky shared responsibility for making their pitch, leading discussions, and writing grants so that group members could attend outside PD together. Asked to define “the work” of their PLG, Vicky said that it was broadly “studying the way that students learn and finding new ways to create meaningful learning cultures,” although under this umbrella they have — in different years — focused on more concrete inquiries: listening and the quality of listening, classroom culture and group learning, play in the classroom (a persistent interest of Ruth’s). Much as in the MLV seminar Ruth attended years earlier, teachers in the PLG undertook their work primarily through discussion, guided loosely by protocols and sometimes in response to articles or a close examination of student work. In many ways, the PLG originally convened by Ruth was acting as a self-contained and self-sustaining “community of practice” and Vicky’s induction, membership, and now leadership represented the process of moving from “legitimate peripheral participation” toward full participation. (Lave & Wenger, 1991).⁵⁸

Agency in Negative Professional Learning

In this section, I turn to anomalous cases – that is, cases of negative learning experiences in which teachers nevertheless reported exercising at least one (and in some cases multiple) dimensions of agency. The expanded conception of agency as multi-dimensional is instructive for parsing teachers’ differentiated responses to negative learning experiences. In particular, negative learning experiences *over* which participants had some degree of agency may be considered rather straightforwardly as simply bad choices. In many

⁵⁸ For another example of legitimate peripheral participation, see Carolyn’s story in Chapter III.

cases, teachers in this situation opted to disengage from the learning experience. However, some teachers exercised agency *during* their NLEs, trying in some way to improve the experience for themselves or others. As noted below, each of these first two responses have satisfying echoes of Hirschman's (1970) "exit" and "voice." Finally, teachers who found agency *emerging from* NLEs tended to be teachers who could find the "silver linings" – that is, they were able to derive concrete and constructive action from an experience that otherwise stood out for its negative qualities.⁵⁹

Agency *over* NLEs was perhaps the most straightforward – and, as noted above, likely recognizable by anyone who has made a regrettable choice. Put plainly, the three teachers in the sample who reported agency over their NLE chose what they expected would be a valuable learning experience, but they were sorely disappointed. Ellen, a math specialist introduced in Chapter II, recalled a mandated district-wide "professional development day" during which teachers could sign up for sessions of their own choosing, many of which were led by other teachers. Years after the fact, Ellen could not remember the content of the workshop, only a visceral memory of how she felt. "All I remember," she said, "was this guy, sitting at his desk, you know, with his feet up like a, you know, a cliché, stereotypical ...high school history teacher. He was arrogant. He, you know, talked. It wasn't well-organized. ...I just remember being completely turned off and not respecting this guy at all, and felt -- really felt -- that it was total bullshit. And, you know, I was really disappointed." Many teachers would recognize Ellen's anguished realization about her choice. For example, Jill, a middle school humanities teacher, volunteered to attend a district-sponsored workshop on the

⁵⁹ In analyzing these cases, I must first acknowledge that across each dimension of agency there were relatively few negative learning experiences. Thus, while the patterns across these experiences may be illuminating they should be interpreted with some caution and not necessarily as indicative of patterns beyond this sample.

Teaching for Understanding (TfU) framework (Blythe & Associates, 1998).⁶⁰ She was initially motivated to attend the workshop because the core ideas as she understood them seemed to reflect “the same stuff that I have done my whole life -- this backward design and essential questions,” but she struggled to understand what made TfU different and what she perceived as a lack of responsiveness by the facilitators led to her to feel bitterly frustrated. “I was trying to match what they were saying to my knowledge base and see, ‘So how is that similar to this situation,’ and it was always unique. What they were saying didn’t match anything else, and I was like, ‘That doesn’t make sense to me.’ But you know it was so much about -- the whole thing become an endeavor in trying to *get it right*.” Feeling condescended to and misunderstood, Jill soon recognized that her expectations for the workshop were not matching her reality and she “just *shut down*.” In Hirschman’s (1970) phrasing, Jill’s disengagement reflected a calculated decision to “exit” the learning environment, even as she still sat in the room. Such disengagement, if exercised by other learners, would ideally act as a signal to the facilitators that something was not working well and needed to be adjusted.

By comparison, NLEs with evidence of agency *during* – at least in this sample – could be seen as a form of Hirschman’s (1970) “voice” option – by which teachers “express their dissatisfaction directly... or through general protest addressed to anyone who cares to listen” (p. 4). As exemplars of a kind of subversiveness, teachers who were unnerved or concerned by what they were seeing or hearing made a calculated choice to try to improve the experience for themselves or others, even though they did not (at least not immediately) alter their negative impression of the experience. Carolyn, an elementary teacher discussed in Chapter III, recalled a college-level course taken during her Master’s program and led by an

⁶⁰ The TfU framework includes four key ideas related to designing units and lessons to engage students in deep, meaningful, and lasting learning experiences: generative topics, understanding goals, performances of understanding, and ongoing assessment (Blythe & Associates, 1998).

adjunct professor who “would just get up and sort of have these meandering storytelling sessions” about herself as a teacher and “how much she really focused on the kids’ individual interests and desires.” From a pedagogical standpoint, Carolyn was distressed but almost resigned. “Having a terrible teacher in a teaching program,” she said, “I mean, it’s not uncommon, as we all know, but it’s just such an irony.” More alarming to Carolyn, though, was that she viewed the instructor’s admonition to “follow [kids’] interests” as professionally irresponsible. “It made me so angry,” Carolyn explained, because she thought it was setting novice teachers up to fail. Based on this assessment, Carolyn viewed it as a professional imperative to undermine the instructor and thereby salvage the learning experience for the other students – many of whom were undergraduate or graduate students who, unlike Carolyn, had not had their own classrooms yet. “Every time we had a break,” she said, “I would just turn around and be like, ‘Don’t listen to anything she is saying. This is not true. You need to plan so much. You need to get all your materials ready in advance. It’s going to be so hard even if you plan. It’s going to be impossible if you don’t.’ And I would just be trying to like undermine her -- like during the five minute breaks.”

A more subtle example of subversive agency during PD was Vicky who recalled a mandatory afterschool workshop to introduce the Olweus Bullying Prevention Program (Limber, 2012; Olweus & Limber, 2010). Confronted with her own misgivings about the program’s definition of bullying and frustrated at the prospect she would nevertheless be required to implement a program about which she had such rudimentary concerns, Vicky found herself an active and vocal participant. “I had a whole list of concerns,” she explained, “and I tried not to be an overly squeaky wheel, but it was always hard!” In the moment, Vicky did not feel that the presenters were responsive to her concerns, but over time the implementation of the program was adapted in ways that Vicky thought responded well to

her questions. As such, she noted that these aspects of the program have since become well integrated into the school and her classroom. “Now that time has passed,” she said, “we don’t feel like we need to follow it to the letter, and the parts that remained are actually pretty good. I mean, there are these great lessons that they have that we were able to integrate ...[into] the morning meeting.” In fact, Vicky’s acknowledgement of the program’s integration into her classroom suggested that she not only exercised agency *during* but also *agency emerging from*. Her combined exercise of agency *during* and *emerging from* her negative learning experience recalled what Lortie (2002) called boundedness, the esteem many teachers give to the boundaries between their classroom and the outside world. “Walls are perceived as beneficial,” Lortie (2002) wrote, “they protect and enhance the course of instruction” (p. 169). Behind these walls, teachers like Vicky were free to make (or not make) the pedagogical adjustments according to their discretion. By giving voice to her misgivings during her PD, Vicky was perhaps signaling her intention to act according to her beliefs rather than the requirements being asked of her, a public surfacing of what may have been tacit convictions, which she then enacted using the agency emerging from the PD.

Vicky’s recognition that the PD she so derided in the moment proved useful to her was an acknowledgment that even negative learning experiences can have a silver lining. In Vicky’s case, the silver lining was perhaps in part a function of her assertiveness during the PD. In the case of Alex, a middle school social studies teacher introduced in Chapter III, the silver lining of his NLE came after the fact. Recalling the three-day workshop – called “Everyday Economics,” led by three professors at a nearby university and offered through his district’s social studies department – Alex was emphatic with his displeasure. “Every day of it was awful,” he said. “The presenters were terrible. They were presenting material that was not applicable or relevant to our kids. ...There was just no way I was going to use that

stuff.” After some reflection, though, Alex tempered his reaction. Required to read two books for the course, he remembered one as “really interesting.”⁶¹ In particular, he remembered a story from the book about a campaign to close a sweatshop that ended up having unintended and negative consequences. It was a story that he subsequently used with his students to make the point that “economics involves a lot of counter-intuitive reasoning. That’s one thing I definitely remember learning in that class. And also that economics is not moral. ...Sometimes economics causes you to think about the world in some interesting ways, through different lenses.” Conceding these points, Alex admitted, “It wasn’t totally useless.” The changes Alex that made to his curriculum and that emerged from this PD seemed at first to be relatively minor – he added in a single illustrative example that he had not used before – but more substantively, I would argue, Alex’s epiphanies about the discipline were critical to his ability to teach it. Understanding economics in new ways – and in ways that had meaning to him – would have made him better positioned to communicate these points to his students. The fact that this learning came in spite of the formal instruction he received (and rather as a self-directed extension of the formal instruction) was likely less important than the fact that the learning resulted in a concrete change to his teaching.

Implications

Based on the preceding analysis of teachers’ professional learning experiences, I draw several implications for PD policy and design. First, from a policy standpoint, a multi-dimensional conceptualization of agency offers multiple pathways for policymakers, system leaders, and school leaders to leverage agency in their efforts to improve PD. Most

⁶¹ The book Alex found valuable was *Naked Economics: Undressing The Dismal Science* (2002), by Charles Wheelan.

straightforwardly, increasing opportunities for teachers to exercise agency *over* their PD – as in Long Beach, CA (Sawchuk, 2015), for example – would not only allow teachers to find learning experiences that they believed would best respond to their learning needs but it is also a concrete demonstration of professional respect for teachers’ judgment. Of course, as the cases of agency over NLEs made apparent, when teachers make choices about PD bad choices are an inevitable by-product. However, in systems where agency over PD is valued and a way of life, teachers may come to see their negative learning experiences less as an indictment of the system itself and more as a cautionary tale to choose differently and better next time. In addition, though, designers and policymakers should ensure that opportunities for agency *during* are included in PD – for example, opportunities for teachers to engage more or less deeply with content through observations, practice, or presentations – and create space for teachers to apply, amplify, or multiply their learning that *emerges from* PD.

Second, in line with a systems view of teacher agency in PD and as Vicky noted earlier, agency over PD was not merely about an individual choice to opt in to learning but about having the latitude to opt out of learning that ceases to be meaningful. As she acknowledged, “I have some really incredible colleagues who are not interested in the [same] work [that interests me]. Which I get.” In this sense, Vicky helps to reframe agency over PD as a system-wide attribute that benefits the collective: that is, when teachers are able to find learning experiences that they perceive as beneficial, they are more likely to be engaged professionals and a greater number of engaged professionals may have positive spillover effects on their colleagues. Hargreaves and Fullan (2012) called for a system that promoted such *collective* autonomy, individual teachers exercising discretion and then sharing their learning with the profession (in much the same way that Michelle, Bonnie, and Ruth each extended the learning that emerged from their PLEs).

Third, while agency may often be well used by teachers either to develop their identities or to acquire needed practical knowledge, I would caution against interpreting these data as saying that teacher agency is a panacea for improving professional development. It may be an important factor, but it is not the only one. Moreover, to be somewhat blunt, some knowledge is simply too important to be left to chance or to choice. For example, frank and authentic conversations about race, class, and culture are often difficult (and so perhaps unlikely to be chosen from a list of options), but when well implemented they can enhance teachers' self-awareness, social awareness, and cultural responsiveness. The point about effective implementation should not be overlooked, though. State-mandated sessions geared toward teaching English language learners, discussed by several teachers in this sample as a negative learning experience, are perhaps an example of sessions whose content, while vital, was undermined by implementation failures.

Fourth, further empirical attention to teachers' subjective perceptions of their learning could better specify the multi-dimensional view of agency, better parsing the various ways that teachers exercise agency *during* or *emerging from* in order to maximize the benefits of powerful learning or to mitigate their disengagement from negative learning.

Conclusion

Despite the uneven performance of professional development, stakeholders at all levels of the education sector – administrators, teachers, researchers – continue to profess great faith in PD's promise toward improving teacher practice and student learning. This faith, I think, is born out of a broader faith in learning itself, an act beginning at birth and continuing more or less uninterrupted across the lifespan. Precisely because learning is universal, each learner is well acquainted with what good learning feels like. In this paper, I

have relied on learners' subjective experiences of "good learning" – in particular, the powerful professional learning experiences of teachers – to explore the conditions under which such learning happens. Critically, I found that powerful learning often happened when learners had control over the how, what, and when of their learning. And so, while I acknowledge that agency is not a cure-all for improving professional development, I also believe that agency – in addition its association with powerful learning – is valuable as a concrete demonstration of professional respect and one that may be a high-leverage tool for improving learning for teachers and students.

V. Conclusion

Sitting on a high stool in the window of a coffee shop, I listened as Chelsea – the inclusion specialist discussed in Chapters II and IV – worked somewhat tentatively through a metaphor about teaching and learning. “Someone told me to think of it in fractals,” she said. Originating in theoretical geometry, fractals are infinitely repeating patterns. Appearing as images or structures or sounds, even ideas, fractals are characterized by “symmetry across scale... recursion, pattern inside of pattern” (Gleick, 1987, p. 103). Teaching and learning can seem similarly nested in that the experience of teachers’ learning cannot easily be separated from the way they were taught and the way they themselves teach. Similarly, all teachers are learners and all learners are (in some sense) teachers, each with discrete but interconnected experiences of teaching and learning that extend infinitely in all directions. The web of interdependence is, in short, extraordinarily complex. Patterns and themes within teaching practices and the subjective experiences of learners — for better and worse — recur across levels and over time.

As we talked, Chelsea began to recognize some patterns in her own experiences of learning and teaching. After reflecting on her powerful learning experience with Gene Thompson-Grove, Chelsea considered whether she herself could replicate the sense of empowerment she felt as a learner in a PD she was just then preparing to facilitate for paraprofessionals in her district: “I want to try to build a professional learning community with them,” she said, “but then release [control] for them to have it on their own.” In thinking about the paraprofessionals who would be learning from and with her, Chelsea looked beyond the PD experience they would share to the students the paras served and then returned to her metaphor: “I know I probably sound nerdy, but I do think of it as

fractals, that I'm trying to help the kids become more independent, and therefore I want to empower [the paraprofessionals], so they can empower the kids.”

In my own experiences as a learner and teacher, I have often had similar epiphanies and made similar proclamations related to symmetry: let teachers' learning mirror what we want for students (e.g., see Diazgranados et al., 2014). Such an idea seems elegant in its simplicity and straightforwardness, but given the persistently unrealized promise of professional development it also seems quaintly if hopelessly idealistic. One reason why such symmetry may be so difficult to achieve – and, for that matter, why much of PD fails to live up to expectations – is evident throughout this thesis. While learners may be motivated by a shared set of basic needs and governed by a shared set of policy objectives, their identities and problems of practice are stubbornly unique, which means that their subjective experiences of learning are similarly diverse.

Despite the stubbornly unique nature of learning, though, the experiences of teachers profiled in this dissertation do suggest some lessons for improving PD design and policy. Broadly speaking, I would maintain that the focus that guided the design of this dissertation may itself be instructive for improving PD. Simply put, I privileged the *process* of learning over the *products* of learning. Privileging the outcome of PD – considered justifiably by many to be student learning – tacitly assumes that there is a predictable pathway to achieve it. I contend that there might well be multiple pathways, some of them possibly quite indirect. For example, the pathway toward student learning for Fran (Chapter II) ran through an African safari, which rejuvenated her own enthusiasm for the content, which in turn led her and her co-teacher to create new learning activities and to assess learning differently, which led them to teach differently. The implicit theory is that Fran's renewed enthusiasm would engage her students more completely and would in turn lead them to

learn more. By contrast, teachers like Jamie (Chapter II) and Trisha (Chapter IV) each learned highly scripted and highly procedural techniques for increasing students' ability to read. The way they learned these techniques varied, but the underlying theory of learning seemed relatively similar: through a structured PD, Jamie and Trisha would be introduced to proven techniques, they would practice these techniques and get feedback on them, they would become more competent using the techniques, they would apply them, and by applying them consistently and with fidelity they would see evidence of student learning. In each of these cases – and the many others presented in this thesis – I believed that *teachers' engagement in a learning process* was a more immediate and essential element of PD than the often indirect and varied theories linking what and how teachers learn to whether and how much students learn.

Despite admonitions that PD is more effective when extended over time, most PDs remain small dosage interventions that designers hope will have lasting effects. Such an arrangement makes learner engagement, discussed in Chapter II, even more important. After all, if a learner is not engaged during a brief interaction, then it is unlikely to last far beyond the PD itself. Moreover, to demand an empirically verifiable link between PD and student learning could mean foreclosing on many of the powerful experiences described in the preceding pages: each of the Fund for Teachers experiences mentioned in Chapter II, Carolyn's participation in creating units of study for teachers across her district in Chapter III, Miriam's relationship with her literacy coach in Chapter IV. These were sometimes messy and meandering – and so resistant to measurement – but they were also deeply and personally *meaningful*.

Indeed, the central importance of *meaningfulness* in professional learning emerged as a critical implication across each of the papers. In assessing the extent to which powerful

learning experiences helped to fulfill teachers' basic needs in Chapter II, I also noted that Turner et al. (2014) specified the importance of meaningfulness for learner engagement. Each of the experiences presented in Chapter II were, to varying degrees, meaningful to the learners. They helped teachers to achieve personal and professional goals. In Chapter III, meaningfulness was characterized by the extent to which teachers were able to align their professional learning experiences with their identities and beliefs. And in Chapter IV, I noted that an important factor that teachers identified when exercising agency was practical knowledge, which by definition was unique to each teacher and their specific problems of practice (Hiebert et al., 2003).

The latitude teachers need to make learning experiences meaningful necessarily requires autonomy or agency, two related concepts discussed in this thesis. Of the three basic needs identified by Deci and Ryan (1985, 2000), autonomy was deemed most central. In addition to being valuable in its own right for promoting intrinsic motivation, autonomy also helped to boost individuals' sense of competence and relatedness. In Chapter III, the alignment of professional learning and identity was often facilitated by autonomy-supportive or agentive behaviors. For example, teachers like Brynn and Carolyn consciously sought out professional learning experiences that were consonant with their beliefs about teaching. And in Chapter IV, I examined in detail why so many of teachers' powerful learning experiences seemed to involve some degree of agency. In short, echoing the previous takeaways, I concluded that teachers were seeking out experiences that were consistent with their identities and that would give them access to relevant knowledge or tools.

Much of professional development – like many education policies – is driven by the imperative for scale. The logic of scale is understandably alluring – if we can find what works, we can positively impact the largest number of beneficiaries – but scale also adversely

scrubs out individual differences. “Effective” PD, as described by the frameworks presented in Chapter II, tends to be designed at the “on average” level. But as I have discussed throughout this dissertation, learning – including powerful learning – is experienced at the level of the individual. This suggests that in the design, dissemination, and study of PD, it would be better to be more attentive to individuals. Even so, I am not making an argument solely in favor of greater differentiation, worthy though that would surely be. Differentiating instruction is predicated on an assumption that all learners are on a continuum, marching toward the same set of pre-defined ends. But that does not well represent what learning is. As I think the diversity of teacher accounts throughout this dissertation helps to make clear (and as I think the diversity of students in any classroom would corroborate), the process of learning defies easy scripting or predicting. Although it may also involve the acquisition of practical knowledge or skills, professional learning is also very much nested in individual meaning-making and identity. In this sense, the ends of professional learning may be just as open to individual interpretation as the means. It is a lesson many policymakers and researchers may be reluctant to learn, but I am cautiously optimistic that this work helps to move incrementally in that direction.

Appendix A: Participant Demographics

Table A.1. Demographic and achievement profiles of the districts in which participating teachers worked (from SY 2014-2015) and teacher characteristics, by district

		District A Bristol	District B Lancaster	District C Seaside	District D Parkland	District E Unionville
district demographics	% African-American	33.6	28.0	4.7	5.9	10.7
	% Latino/a	40.9	13.5	48.2	10.0	17.9
	% White	13.8	39.0	39.2	56.3	36.0
	% ELL	29.8	8.2	16.0	9.7	17.4
	% with disabilities	19.5	20.5	14.7	16.3	21.0
	% economically disadvantaged ^a	49.3	27.7	37.4	7.5	35.5
	state accountability level ^b	Level 4	Level 3	Level 2	Level 2	Level 3
teacher sample (n=25)	Gender					
	female (n=20)	8	5	2	3	2
	male (n=5)	3	0	0	1	1
	Grade Level					
	K-5 (n=11)	5	4	0	2	0
	6-8 (n=9)	1	1	2	2	3
	9-12 (n=5)	5	0	0	0	0
Years of Experience						
3-5 (n=6)	2	2	1	0	1	
6+ (n=19)	9	3	1	4	2	
	Total	11	5	2	4	3

^a Based on students' participation in one or more of the following state programs: Supplemental Nutrition Assistance Program (SNAP); Transitional Assistance for Families with Dependent Children (TAFDC); foster care; and Medicaid.

^b The state accountability system rates schools on one of five levels, with Level 1 the highest performing and Level 5 the lowest performing. A district's level is generally determined by the lowest rated schools within the district. Level 3 indicates a school is in the lowest 20 percent of schools statewide, based on proficiency rates on the state test, with Levels 4 and 5 representing the lowest achieving and least improving within the bottom 20 percent.

Appendix B: Interview Protocol

Background

1. Can you tell me about how you came to teaching?
 - a. How did you come to your current position?
 - b. How long have you been in your current position?

Baseline beliefs about teaching and learning

2. In your opinion, how do people become better teachers?
 - a. What do teachers need to learn?
 - b. Who should help teachers learn this content?
 - c. Is it important how they learn this content (e.g., format, pedagogy)?
 - d. Is it necessary to have formal learning? Why or why not?

Experiences with professional learning

Establishing contrasting cases of professional learning

3. Based on your experience as a teacher, would you say that there is such a thing as a “typical” professional learning experience?
 - a. (If so,) tell me about it. What made it typical? Why do you believe it to be typical?
 - b. (If no,) can you describe 2-3 different kinds of professional learning that you have experienced? What makes them different? Have other teachers you know had similar experiences? If so, how do you know?

Reconstructing a powerful professional learning experience

4. For this project, I am interested in exploring powerful professional learning experiences that teachers remember as being especially impactful. In your work as a teacher, is there one professional learning experience that stands out as especially powerful and impactful?
 - a. Can you walk me through this experience?
 - b. What made it powerful?
 - c. Was there particular content you were supposed to be learning?
 - d. Was this experience required by someone or voluntary?
 - e. Who else participated?
 - f. Was there a facilitator or facilitators? What did he or she (or they) do? How did they convey new information?
 - g. If there was a facilitator, how would you describe the relationship between the facilitator and the learners?
 - h. How would you describe the relationship between yourself and other learners?
 - i. How does this professional learning experience compare to a less positive professional learning experience?

Establishing the perceived impact of the above professional learning experience

5. Thinking back on this professional learning experience, what do you think you learned?
 - a. Did you learn something about content?
 - b. Did you learn something about instructional activities?
 - c. Did you learn something about yourself?
 - d. Did you learn something about your colleagues/school?
 - e. Did you learn something about teaching or about learning?
 - f. Was there something that you remember changing about your practice/something you did differently in your teaching after this professional learning experience?

Allowing for divergent interpretations of the above professional learning experience

6. Are there things about this professional learning experience that you think could have made it more positive for you?
 - a. (If so,) tell about what would have made it more positive.

Introducing contrasting cases

7. Can you tell me now about a professional learning experience that you would like never to have again?
 - a. Can you walk me through the experience?
 - b. What made it negative?
 - c. Was there particular content you were supposed to be learning?
 - d. Was this experience required by someone or voluntary?
 - e. Who else participated?
 - f. Was there a facilitator or facilitators? What did he or she (or they) do? How did they convey new information?
 - g. If there was a facilitator, how would you describe the relationship between the facilitator and the learners?
 - h. How would you describe the relationship between yourself and other learners?

Conclusion

8. Is there anything else that you would like to talk about that we have not had a chance to talk about?

Appendix C: Participant Index

In the table below, I list the 25 participants in this study and brief summaries of their powerful and negative learning experiences. In addition, I note if and when they appear throughout this thesis. That I was not able to incorporate the stories from every participant into these papers is not a reflection on the quality of the stories themselves, but rather the calculated (though difficult) choices involved in undertaking a balanced and detailed analysis.

Name <i>Grade, Subject</i>	Powerful Learning Experience	Negative Learning Experience*	Paper 1: Engagement	Paper 2: Identity	Paper 3: Agency
Jamie <i>1, Reading Recovery</i>	Reading Recovery continuing professional development	n/a	Yes	No	No
Mark <i>6-8, special education</i>	EL Education Institute at Eagle Rock School (one week)	n/a	No	No	Yes
Laurie <i>9-12, Spanish</i>	Fund For Teachers trip to South America with colleague	state-mandated training on ELLs (#)	Yes	No	No
Fran <i>4, inclusion</i>	Fund For Teachers trip to Africa with co-teacher	n/a	Yes	No	Yes
Maria <i>pre-K, music</i>	First Steps in Music intro workshop (one-day)	n/a	Yes	No	No
Wayne <i>9-12, English</i>	Conferring With Struggling Writers, Carl Anderson (one-day)	Writers Workshop, school visit	Yes	Yes	No
Diana <i>9-12, science</i>	Fund For Teachers trip to Africa with colleague	n/a	No	No	No
Carolyn <i>1</i>	district-wide ELA curriculum writing project	preservice course on developmentally appropriate teaching	Yes	Yes	Yes
Jill <i>6-8, humanities</i>	Middle School Drama Collaborative (two years)	intro workshop to Teaching for Understanding	Yes	No	Yes
Annie <i>2</i>	district-required orientation for teachers new to the district	district-required orientation for new teachers	Yes	No	No
Brynn <i>7-8, math</i>	Common Core math workshops with Andrew Chen	district-required orientation for new teachers	No	Yes	Yes

Name <i>Grade, Subject</i>	Powerful Learning Experience	Negative Learning Experience*	Paper 1: Engagement	Paper 2: Identity	Paper 3: Agency
Kelli <i>6-8, biology/drama</i>	UDL Summer Institute, HGSE	afterschool workshop on cyberbullying	Yes	No	No
Ruth <i>6-8, English</i>	Making Learning Visible (two years)	n/a	No	No	Yes
Ellen <i>K-8, math</i>	Mathematics for Tomorrow (two years)	district PD day	Yes	No	Yes
Vicky <i>5</i>	school-based, MLV-inspired affinity group (ongoing)	intro workshop to Olweus Anti-bullying Program	Yes	No	Yes
Chelsea <i>K-8, inclusion</i>	Facilitative Leadership (one week)	outside consultation on inclusion coaching (#)	Yes	No	Yes
Sandra <i>1-2</i>	1) institutes through National Writing Project; 2) Courage To Teach (two years)	school-based intro to UDL (#)	No	No	No
Alex <i>6-8, social studies</i>	Introduction to Developmental Designs (one week)	Everyday Economics (3-days)	No	Yes	Yes
Gloria <i>6-8, special education</i>	Workshop on Co-Teaching, with Lisa Dieker	state-mandated training on ELLs	No	No	No
Trisha <i>5-6, English/social studies</i>	Wilson Reading System certification training (one year)	school-based workshop on project-based learning	Yes	No	Yes
David <i>7-8, English</i>	Advancement Via Individual Determination (AVID) (one week)	state-mandated training on ELLs	Yes	No	No
Miriam <i>K-8, ESL</i>	school-based mentoring relationship (ongoing)	afterschool workshop on cultural competence	No	No	Yes
Bonnie <i>K-1</i>	CFG leader training (one week, ongoing)	n/a	Yes	No	Yes
Peter <i>9-12, media</i>	school-based PD, mandated by turnaround status (weekly, ongoing)	state-mandated training on ELLs	No	No	No
Michelle <i>11-12, English</i>	self-study of teaching academic language (ongoing)	grade-level inquiry mandated by school administration	Yes	No	Yes

*Regarding NLEs, I listed every experience discussed by participants, no matter how briefly or generally. However, as noted in Paper 3, some of these accounts proved too abstract for substantive and comparative analysis. Those accounts not included in my analysis are marked with a (#).

References

- Akkerman, S. F., & Meijer, P. C. (2011). A dialogical approach to conceptualizing teacher identity. *Teaching and Teacher Education, 27*(2), 308–319.
<http://doi.org/10.1016/j.tate.2010.08.013>
- Alliance for Excellent Education. (2014). *On the Path to Equity: Improving the Effectiveness of Beginning Teachers*. Washington, D.C.: Alliance for Excellent Education. Retrieved from <http://all4ed.org/wp-content/uploads/2014/07/PathToEquity.pdf>
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*(3), 261–271. <http://doi.org/10.1037/0022-0663.84.3.261>
- Assor, A., Kaplan, H., & Roth, G. (2002). Choice is good, but relevance is excellent: Autonomy-enhancing and -suppressing teacher behaviours predicting students' engagement in schoolwork. *British Journal of Educational Psychology, 72*(2), 261–278.
<http://doi.org/10.1348/000709902158883>
- Bakhtin, M. M. (1981). *The Dialogic Imagination: Four Essays*. (M. Holquist, Trans.). Austin: University of Texas Press.
- Ball, D. L., Thames, M. H., & Phelps, G. (2008). Content knowledge for teaching: What makes it special? *Journal of Teacher Education, 59*(5), 389–407.
<http://doi.org/10.1177/0022487108324554>
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37*(2), 122–147. <http://doi.org/10.1037/0003-066X.37.2.122>
- Bandura, A. (1997). *Self-Efficacy: The Exercise of Control*. New York: WHFreeman.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*(1), 1–26. <http://doi.org/10.1146/annurev.psych.52.1.1>

- Beijaard, D., Meijer, P. C., & Verloop, N. (2004). Reconsidering research on teachers' professional identity. *Teaching and Teacher Education*, 20(2), 107–128.
<http://doi.org/10.1016/j.tate.2003.07.001>
- Beijaard, D., Verloop, N., & Vermunt, J. D. (2000). Teachers' perceptions of professional identity: An exploratory study from a personal knowledge perspective. *Teaching and Teacher Education*, 16(7), 749–764. [http://doi.org/10.1016/S0742-051X\(00\)00023-8](http://doi.org/10.1016/S0742-051X(00)00023-8)
- Berry, B. (2014, December 11). If teachers know best about professional learning... let's follow their lead. Retrieved from <http://teachingquality.org/content/blogs/barnett-berry/if-teachers-know-best-about-professional-learning>
- Berry, B., Daughtrey, A., Darling-Hammond, L., & Cook, C. (2012). *Transforming Professional Learning in Kentucky: Meeting the Demands of the Common Core State Standards*. Palo Alto, CA: Stanford Center for Opportunity Policy in Education.
- Biesta, G., Priestley, M., & Robinson, S. (2015). The role of beliefs in teacher agency. *Teachers and Teaching: Theory and Practice*, 21(6), 624–640.
<http://doi.org/10.1080/13540602.2015.1044325>
- Blythe, T., & Associates. (1998). *The Teaching for Understanding Guide*. San Francisco: Jossey-Bass.
- Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher*, 33(8), 3–15. <http://doi.org/10.3102/0013189X033008003>
- Borko, H., Elliott, R., & Uchiyama, K. (2002). Professional development: A key to Kentucky's educational reform effort. *Teaching and Teacher Education*, 18(8), 969–987.
[http://doi.org/10.1016/S0742-051X\(02\)00054-9](http://doi.org/10.1016/S0742-051X(02)00054-9)
- Borko, H., & Putnam, R. T. (1995). Expanding a Teacher's Knowledge Base: A Cognitive Psychological Perspective on Professional Development. In T. R. Guskey & M.

- Huberman (Eds.), *Professional development in education : new paradigms and practices* (pp. 35–65). New York: Teachers College Press.
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.). (2000). *How People Learn: Brain, Mind, Experience, and School: Expanded Edition*. Washington, D.C.: National Academy Press.
- Bridwell-Mitchell, E. N. (2015). Theorizing teacher agency and reform: How institutionalized instructional practices change and persist. *Sociology of Education*, 88(2), 140–159.
<http://doi.org/10.1177/0038040715575559>
- Bryk, A. S., & Schneider, B. (2002). *Trust in Schools: A Core Resource for Improvement*. New York: Russell Sage Foundation.
- Bryk, A. S., Sebring, P. B., Allensworth, E., Easton, J. Q., & Luppescu, S. (2010). *Organizing Schools for Improvement: Lessons from Chicago*. Chicago: University of Chicago Press.
- Buchanan, R. (2015). Teacher identity and agency in an era of accountability. *Teachers and Teaching*, 21(6), 700–719. <http://doi.org/10.1080/13540602.2015.1044329>
- Calhoun, C. J. (Ed.). (2002). *Dictionary of the Social Sciences*. New York: Oxford University Press. Retrieved from http://nrs.harvard.edu/urn-3:hul.ebookbatch.GEN_batch:ORO00420150428
- Calvert, L. (2016). *Moving From Compliance to Agency: What Teachers Need to Make Professional Learning Work*. Oxford, OH: Learning Forward and NCTAF. Retrieved from <https://learningforward.org/docs/default-source/pdf/teacheragencyfinal.pdf>
- Campbell, C. (2009). Distinguishing the power of agency from agentic power: A note on Weber and the “black box” of personal agency. *Sociological Theory*, 27(4), 407–418.
<http://doi.org/10.1111/j.1467-9558.2009.01355.x>
- Caprara, G. V., Barbaranelli, C., Steca, P., & Malone, P. S. (2006). Teachers’ self-efficacy beliefs as determinants of job satisfaction and students’ academic achievement: A

- study at the school level. *Journal of School Psychology, 44*(6), 473–490.
<http://doi.org/10.1016/j.jsp.2006.09.001>
- Carpenter, J. P. (2016). Teachers at the wheel. *Educational Leadership, 73*(8), 30–35.
- Carpenter, J. P., & Krutka, D. G. (2015). Engagement through microblogging: Educator professional development via Twitter. *Professional Development in Education, 41*(4), 707–728. <http://doi.org/10.1080/19415257.2014.939294>
- Clay, M. M. (1993). *Reading Recovery: A Guide Book for Teachers in Training*. Portsmouth, NH: Heinemann.
- Coburn, C. E. (2004). Beyond decoupling: Rethinking the relationship between the institutional environment and the classroom. *Sociology of Education, 77*(3), 211–244.
- Creswell, J. W. (2013). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (3rd ed.). Los Angeles: SAGE Publications.
- Curry, M. (2008). Critical Friends Groups: The possibilities and limitations embedded in teacher professional communities aimed at instructional improvement and school reform. *Teachers College Record, 110*(4), 733–774.
- Darling-Hammond, L., Wei, R. C., Andree, A., Richardson, N., & Orphanos, S. (2009). *Professional Learning in the Learning Profession: A Status Report on Teacher Development in the United States and Abroad*. National Staff Development Council. Retrieved from <http://www.learningforward.org/docs/pdf/nsdcstudy2009.pdf>
- Day, C., Elliot, B., & Kington, A. (2005). Reform, standards and teacher identity: Challenges of sustaining commitment. *Teaching and Teacher Education, 21*(5), 563–577.
<http://doi.org/10.1016/j.tate.2005.03.001>

- Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, 125(6), 627–668. <http://doi.org/10.1037/0033-2909.125.6.627>
- Deci, E. L., & Moller, A. C. (2005). The Concept of Competence: A Starting Place for Understanding Intrinsic Motivation and Self-Determined Extrinsic Motivation. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of Competence and Motivation* (pp. 579–597). New York: Guilford Press.
- Deci, E. L., & Ryan, R. M. (1991). A Motivational Approach to Self: Integration in Personality. In R. Dienstbier (Ed.), *Nebraska Symposium on Motivation* (Vol. 38, pp. 237–288). Lincoln, NE: University of Nebraska Press.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. http://doi.org/10.1207/S15327965PLI1104_01
- Deci, E. L., & Ryan, R. M. (2013). The Importance of Autonomy for Development and Well-Being. In B. W. Sokol, F. M. E. Grouzet, U. Mueller, & U. Müller (Eds.), *Self-regulation and Autonomy: Social and Developmental Dimensions of Human Conduct* (pp. 19–46). New York: Cambridge University Press.
- Deci, E. L., & Ryan, R. M. (2014). Autonomy and Need Satisfaction in Close Relationships: Relationships Motivation Theory. In N. Weinstein (Ed.), *Human Motivation and Interpersonal Relationships: Theory, Research, and Applications*. Dordrecht: Springer Netherlands. Retrieved from http://nrs.harvard.edu/urn-3:hul.ebookbatch.SPRGR_batch:9789401785426

- Deci, E. L., Vallerand, R. J., Pelletier, L. G., & Ryan, R. M. (1991). Motivation and education: The self-determination perspective. *Educational Psychologist, 26*(3-4), 325–346.
<http://doi.org/10.1080/00461520.1991.9653137>
- Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher, 38*(3), 181–199. <http://doi.org/10.3102/0013189X08331140>
- Diazgranados, S., Noonan, J., Brion-Meisels, S., Saldarriaga, L., Daza, B. C., Chávez, M., & Antonellis, I. (2014). Transformative peace education with teachers: Lessons from Juegos de Paz in rural Colombia. *Journal of Peace Education, 11*(2), 150–161.
<http://doi.org/10.1080/17400201.2014.898627>
- Dik, B. J., & Duffy, R. D. (2009). Calling and vocation at work: Definitions and prospects for research and practice. *The Counseling Psychologist, 37*(3), 424–450.
<http://doi.org/10.1177/0011000008316430>
- Duckworth, E. R. (1987). *"The Having of Wonderful Ideas" and Other Essays on Teaching and Learning*. New York: Teachers College Press.
- Duncan-Andrade, J. (2004). Toward teacher development for the urban in urban teaching. *Teaching Education, 15*(4), 339–350. <http://doi.org/10.1080/1047621042000304475>
- Elmore, R. F. (2004). *School Reform From the Inside Out: Policy, Practice, and Performance*. Cambridge, MA: Harvard Education Press.
- Emirbayer, M., & Mische, A. (1998). What is agency? *American Journal of Sociology, 103*(4), 962–1023. <http://doi.org/10.1086/231294>
- Feierabend, J. M. (2000). *First Steps in Music for Infants & Toddlers: Birth Through 36 Months*. Chicago: GIA Publications, Inc.

- Feierabend, J. M. (2006). *First Steps in Music for Preschool and Beyond*. Chicago: GIA Publications, Inc.
- Feiman-Nemser, S. (2001). Helping novices learn to teach: Lessons from an exemplary support teacher. *Journal of Teacher Education*, 52(1), 17–30.
<http://doi.org/10.1177/0022487101052001003>
- Feldon, D. F. (2007). Cognitive load and classroom teaching: The double-edged sword of automaticity. *Educational Psychologist*, 42(3), 123–137.
<http://doi.org/10.1080/00461520701416173>
- Fillmore, L. W. (2014). English language learners at the crossroads of educational reform. *TESOL Quarterly*, 48(3), 624–632. <http://doi.org/10.1002/tesq.174>
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59–109.
- Garet, M. S., Cronen, S., Eaton, M., Kurki, A., Ludwig, M., Jones, W., ... Szejnberg, L. (2008). *The Impact of Two Professional Development Interventions on Early Reading Instruction and Achievement* (No. NCEE 2008-4030). Washington, D.C.: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from
<http://www.eric.ed.gov/ERICWebPortal/detail?accno=ED502700>
- Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38(4), 915–945.
<http://doi.org/10.3102/00028312038004915>
- Garet, M. S., Wayne, A. J., Stancavage, F., Taylor, J., Eaton, M., Walters, K., ... Doolittle, F. (2011). *Middle School Mathematics Professional Development Impact Study: Findings After the*

- Second Year of Implementation* (No. NCEE 2011-4024). Washington, D.C.: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from http://www.mdrc.org/sites/default/files/full_442.pdf
- Gates Foundation. (2014). *Teachers Know Best: Teachers' Views on Professional Development*. Seattle, WA: Bill & Melinda Gates Foundation. Retrieved from <http://k12education.gatesfoundation.org/wp-content/uploads/2015/04/Gates-PDMarketResearch-Dec5.pdf>
- Gault, B. (2002). Effects of pedagogical approach, presence/absence of text, and developmental music aptitude on the song performance accuracy of kindergarten and first-grade students. *Bulletin of the Council for Research in Music Education*, (152), 54–63.
- Giudici, C., Rinaldi, C., & Krechevsky, M. (Eds.). (2001). *Making Learning Visible: Children as Individual and Group Learners* (1st ed.). Reggio Emilia, Italy: Reggio Children.
- Glazer, E. M., & Hannafin, M. J. (2006). The collaborative apprenticeship model: Situated professional development within school settings. *Teaching and Teacher Education*, 22(2), 179–193. <http://doi.org/10.1016/j.tate.2005.09.004>
- Gleick, J. (1987). *Chaos: Making a New Science*. New York: Penguin Books.
- Goldstein, J. (2006). Debunking the fear of peer review: Combining supervision and evaluation and living to tell about it. *Journal of Personnel Evaluation in Education*, 18(4), 235–252. <http://doi.org/10.1007/s11092-006-9022-3>
- Gorozidis, G., & Papaioannou, A. G. (2014). Teachers' motivation to participate in training and to implement innovations. *Teaching and Teacher Education*, 39, 1–11. <http://doi.org/10.1016/j.tate.2013.12.001>

- Grossman, P., Wineburg, S., & Woolworth, S. (2001). Toward a theory of teacher community. *Teachers College Record*, 103(6), 942–1012.
- Hargreaves, A. (2008). Leading Professional Learning Communities: Moral Choices Amid Murky Realities. In A. M. Blankstein, P. D. Houston, & R. W. Cole (Eds.), *Sustaining Professional Learning Communities* (Vol. 3, pp. 175–197). Thousand Oaks, CA: Corwin Press.
- Hargreaves, A., & Fullan, M. (2012). *Professional Capital: Transforming Teaching in Every School*. New York: Teachers College Press.
- Harnett, J. (2012). Reducing discrepancies between teachers' espoused theories and theories-in-use: An action research model of reflective professional development. *Educational Action Research*, 20(3), 367–384. <http://doi.org/10.1080/09650792.2012.697397>
- Hartree, A. (1984). Malcolm Knowles' theory of andragogy: A critique. *International Journal of Lifelong Education*, 3(3), 203–210. <http://doi.org/10.1080/0260137840030304>
- Hattie, J., & Yates, G. C. R. (2014). *Visible Learning and the Science of How We Learn*. London: Routledge.
- Hawley, W. D., & Valli, L. (1999). The essentials of effective professional development: A new consensus. In L. Darling-Hammond & G. Sykes (Eds.), *Teaching as the Learning Profession: Handbook of Policy and Practice* (1st ed., pp. 127–150). San Francisco: Jossey-Bass.
- Heclo, H. (2008). *On Thinking Institutionally*. Boulder, CO: Paradigm Publishers.
- Hess, D. E. (2009). *Controversy in the Classroom: The Democratic Power of Discussion*. New York: Routledge.
- Hiebert, J., Gallimore, R., Garnier, H., Givvin, K. B., Hollingsworth, H., Jacobs, J., ... Stigler, J. (2003). *Teaching Mathematics in Seven Countries: Results from the TIMSS 1999*

- Video Study*. Washington, DC: National Center for Education Statistics. Retrieved from <http://nces.ed.gov/pubs2003/2003013.pdf>
- Hiebert, J., Gallimore, R., & Stigler, J. W. (2002). A knowledge base for the teaching profession: What would it look like and how can we get one? *Educational Researcher*, 31(5), 3–15. <http://doi.org/10.3102/0013189X031005003>
- Hight, G. (1950). *The Art of Teaching* (1st ed.). New York: Knopf.
- Hill, H. C., & Ball, D. L. (2009). The curious - and crucial - case of mathematical knowledge for teaching. *Phi Delta Kappan*, 91(2), 68–71.
- Hill, H. C., Beisiegel, M., & Jacob, R. (2013). Professional development research consensus, crossroads, and challenges. *Educational Researcher*, 42(9), 476–487. <http://doi.org/10.3102/0013189X13512674>
- Hill, H. C., Rowan, B., & Ball, D. L. (2005). Effects of teachers' mathematical knowledge for teaching on student achievement. *American Educational Research Journal*, 42(2), 371–406.
- Hirschman, A. O. (1970). *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge, MA: Harvard University Press. Retrieved from http://nrs.harvard.edu/urn-3:hul.ebookbatch.ACLS_batch:MIU01000000000000005410755
- Hochberg, E. D., & Desimone, L. M. (2010). Professional development in the accountability context: Building capacity to achieve standards. *Educational Psychologist*, 45(2), 89–106. <http://doi.org/10.1080/00461521003703052>
- Holland, D., Lachicotte, W., Skinner, D., & Cain, C. (1998). *Identity and Agency in Cultural Worlds*. Cambridge, MA: Harvard University Press.
- Huberman, M. (1989). The professional life cycle of teachers. *Teachers College Record*, 91(1), 31.

- Huberman, M. (1993). *The Lives of Teachers*. (J. Neufeld, Trans.). London: Casell ; New York.
- Ingersoll, R., Merrill, L., & Stuckey, D. (2014). *Seven Trends: The Transformation of the Teaching Force* (CPRE Report No. RR-80). Philadelphia: Consortium for Policy Research in Education. Retrieved from http://cpre.org/sites/default/files/workingpapers/1506_7trendsapril2014.pdf
- Ingvarson, L., Meiers, M., & Beavis, A. (2005). Factors affecting the impact of professional development programs on teachers' knowledge, practice, student outcomes & efficacy. *Education Policy Analysis Archives*, 13(10), 1–26. <http://doi.org/10.14507/epaa.v13n10.2005>
- Jackson, C. K., & Bruegmann, E. (2009). *Teaching Students and Teaching Each Other: The Importance of Peer Learning for Teachers* (Working Paper No. 15202). National Bureau of Economic Research. Retrieved from <http://www.nber.org/papers/w15202>
- Janke, S., Nitsche, S., & Dickhäuser, O. (2015). The role of perceived need satisfaction at work for teachers' work-related learning goal orientation. *Teaching and Teacher Education*, 47, 184–194. <http://doi.org/10.1016/j.tate.2015.01.009>
- Johnson, S. M. (1990). *Teachers at Work: Achieving Success in Our Schools*. New York: Basic Books.
- Johnson, S. M., & Birkeland, S. E. (2003). Pursuing a “sense of success”: New teachers explain their career decisions. *American Educational Research Journal*, 40(3), 581–617.
- Kane, T. J., & Staiger, D. O. (2008). *Estimating Teacher Impacts on Student Achievement: An Experimental Evaluation* (Working Paper No. 14607). Cambridge, MA: National Bureau of Economic Research. Retrieved from <http://www.nber.org/papers/w14607>

- Kegan, R. (2000). What “Forms” Transforms? A Constructive-Developmental Approach to Transformative Learning. In J. Mezirow (Ed.), *Learning as Transformation: Critical Perspectives on a Theory in Progress* (pp. 35–79). San Francisco: Jossey-Bass.
- Kelly, G. (1955). *The Psychology of Personal Constructs* (1st ed.). New York: Norton.
- Kennedy, M. (1998). *Form and Substance in Inservice Teacher Education* (Research Monograph No. 13). Madison, WI: National Institute for Science Education, University of Wisconsin-Madison. Retrieved from <http://www.eric.ed.gov/ERICWebPortal/detail?accno=ED472719>
- Kim, J. S. (2008). Research and the Reading Wars. In F. M. Hess (Ed.), *When Research Matters: How Scholarship Influences Education Policy* (pp. 89–111). Cambridge, MA: Harvard Education Press.
- Klassen, R. M., Perry, N. E., & Frenzel, A. C. (2012). Teachers’ relatedness with students: An underemphasized component of teachers’ basic psychological needs. *Journal of Educational Psychology, 104*(1), 150–165. <http://doi.org/10.1037/a0026253>
- Knowles, M. S. (1980). *The Modern Practice of Adult Education: From Pedagogy to Andragogy* (Revised and updated). New York: The Adult Education Company.
- Krechevsky, M. (2012). Changing our skin: Creating collective knowledge in American classrooms. *The New Educator, 8*(1), 12–37. <http://doi.org/10.1080/1547688X.2012.641867>
- Krechevsky, M., Mardell, B., Rivard, M., & Wilson, D. G. (2013). *Visible Learners: Promoting Reggio-inspired Approaches in All Schools*. San Francisco: Jossey-Bass.
- Krueger, N. F. (2007). What lies beneath? The experiential essence of entrepreneurial thinking. *Entrepreneurship Theory and Practice, 31*(1), 123–138. <http://doi.org/10.1111/j.1540-6520.2007.00166.x>

- Kuh, L. P. (2016). Teachers talking about teaching and school: Collaboration and reflective practice via Critical Friends Groups. *Teachers and Teaching*, 22(3), 293–314.
<http://doi.org/10.1080/13540602.2015.1058589>
- Lampert, M. (1990). When the problem is not the question and the solution is not the answer: Mathematical knowing and teaching. *American Educational Research Journal*, 27(1), 29–63. <http://doi.org/10.3102/00028312027001029>
- Lampert, M. (2001). *Teaching Problems and the Problems of Teaching*. New Haven: Yale University Press.
- Lasky, S. (2005). A sociocultural approach to understanding teacher identity, agency and professional vulnerability in a context of secondary school reform. *Teaching and Teacher Education*, 21(8), 899–916. <http://doi.org/10.1016/j.tate.2005.06.003>
- Lave, J., & Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. Cambridge: Cambridge University Press.
- Leung, F. K. S. (2005). Some Characteristics of East Asian Mathematics Classrooms Based on Data from the Timss 1999 Video Study. *Educational Studies in Mathematics*, 60(2), 199–215. <http://doi.org/10.1007/s10649-005-3835-8>
- Limber, S. P. (2012). The Olweus Bullying Prevention Program: An Overview of Its Implementation and Research Basis. In S. R. Jimerson, A. B. Nickerson, M. J. Mayer, & M. J. Furlong (Eds.), *Handbook of school violence and school safety: international research and practice* (2nd ed., pp. 369–381). New York: Routledge.
- Lipsky, M. (2010). *Street-Level Bureaucracy: Dilemmas of the Individual in Public Service*. New York: Russell Sage Foundation. Retrieved from <http://muse.jhu.edu.ezp-prod1.hul.harvard.edu/book/15024>

- Little, J. W., & Horn, I. S. (2007). "Normalizing" Problems of Practice: Converting Routine Conversation into a Resource for Learning in Professional Communities. In L. Stoll & K. Seashore Louis (Eds.), *Professional Learning Communities: Divergence, Detail, Difficulties* (pp. 79–92). Buckingham, UK: Open University Press. Retrieved from <http://site.ebrary.com/lib/alltitles/docDetail.action?docID=10197007>
- Lochman, J. E., Holmes, K. J., & Wojnaroski, M. (2008). Children and Cognition: Development of Social Schema. In J. K. Asamen, M. L. Ellis, & G. L. Berry (Eds.), *The SAGE Handbook of Child Development, Multiculturalism, and Media* (pp. 33–46). Thousand Oaks, CA: SAGE Publications.
- Lortie, D. C. (2002). *Schoolteacher: A Sociological Study* (2nd ed.). Chicago: University of Chicago Press.
- Louis, K. S., & Marks, H. M. (1998). Does professional community affect the classroom? Teachers' work and student experiences in restructuring schools. *American Journal of Education*, 106(4), 532–575.
- Martin, A. J., & Dowson, M. (2009). Interpersonal relationships, motivation, engagement, and achievement: Yields for theory, current issues, and educational practice. *Review of Educational Research*, 79(1), 327–365.
- Massachusetts Department of Elementary and Secondary Education. (2015, June). Guidelines for Professional Development Providers. Retrieved from <http://www.doe.mass.edu/pd/ProviderGuidelines.pdf>
- May, H., Gray, A., Sirinides, P., Goldsworthy, H., Armijo, M., Sam, C., ... Tognatta, N. (2015). Year one results from the multisite randomized evaluation of the i3 scale-up of Reading Recovery. *American Educational Research Journal*, 52(3), 547–581. <http://doi.org/10.3102/0002831214565788>

- McAdams, D. P. (1993). *The Stories We Live By: Personal Myths and the Making of the Self* (1st ed.). New York: W. Morrow.
- McDonald, J. P., Mohr, N., Dichter, A., & McDonald, E. C. (2007). *The Power of Protocols: An Educator's Guide to Better Practice* (2nd ed.). New York: Teachers College Press.
- McLean, K. C., Pasupathi, M., & Pals, J. L. (2007). Selves creating stories creating selves: A process model of self-development. *Personality and Social Psychology Review*, 11(3), 262–278. <http://doi.org/10.1177/1088868307301034>
- Merriam, S. B. (2001). Andragogy and self-directed learning: Pillars of adult learning theory. *New Directions for Adult and Continuing Education*, 2001(89), 3–14. <http://doi.org/10.1002/ace.3>
- Merriam, S. B., Caffarella, R. S., & Baumgartner, L. (2006). *Learning in Adulthood: A Comprehensive Guide* (3rd ed.). San Francisco: Jossey-Bass.
- Mezirow, J. (1997). Transformative learning: Theory to practice. *New Directions for Adult and Continuing Education*, 1997(74), 5–12. <http://doi.org/10.1002/ace.7401>
- Mockler, N. (2011). Beyond “what works”: Understanding teacher identity as a practical and political tool. *Teachers and Teaching*, 17(5), 517–528. <http://doi.org/10.1080/13540602.2011.602059>
- National Center for Education Statistics. (2014). Digest of Education Statistics, 2014. Retrieved March 3, 2016, from https://nces.ed.gov/programs/digest/d14/tables/dt14_209.10.asp
- Nave, B. (2015). *Student-Centered Learning: Nine Classrooms in Action*. Cambridge, MA: Harvard Education Press, 2015.
- Nelson, B. S., & Hammerman, J. K. (1996). Reconceptualizing Teaching: Moving Toward the Creation of Intellectual Communities of Students, Teachers, and Teacher

- Educators. In M. W. McLaughlin & I. Oberman (Eds.), *Teacher Learning: New Policies, New Practices* (pp. 3–21). New York: Teachers College Press.
- Newmann, F. M., Marks, H. M., & Gamoran, A. (1996). Authentic pedagogy and student performance. *American Journal of Education*, *104*(4), 280–312.
- Noonan, J. (2014a). In here, out there: Professional learning and the process of school improvement. *Harvard Educational Review*, *84*(2), 145–161.
- Noonan, J. (2014b, February). *Efficiency or Deliberation? An Analysis and Re-imagination of Professional Development's Promise and Purpose* (Qualifying Paper). Harvard Graduate School of Education, Cambridge, MA.
- OECD. (1998). *Staying Ahead: In-Service Training and Teacher Professional Development*. Paris: Organisation for Economic Co-operation and Development. Retrieved from <http://www.oecd-ilibrary.org/content/book/9789264163041-en>
- Olweus, D., & Limber, S. P. (2010). Bullying in school: Evaluation and dissemination of the Olweus Bullying Prevention Program. *American Journal of Orthopsychiatry*, *80*(1), 124–134. <http://doi.org/10.1111/j.1939-0025.2010.01015.x>
- Opfer, V. D., & Pedder, D. (2011). Conceptualizing teacher professional learning. *Review of Educational Research*, *81*(3), 376–407. <http://doi.org/10.3102/0034654311413609>
- Papay, J. P., Taylor, E. S., Tyler, J. H., & Laski, M. (2016). *Learning Job Skills from Colleagues at Work: Evidence from a Field Experiment Using Teacher Performance Data* (Working Paper No. 21986). National Bureau of Economic Research. Retrieved from <http://www.nber.org/papers/w21986>
- Patton, M. Q. (2002). *Qualitative Research and Evaluation Methods* (3rd ed.). Thousand Oaks, CA: Sage Publications.

- Perkins, D. (1992). *Smart Schools: Better Thinking and Learning for Every Child*. New York: The Free Press.
- Peshkin, A. (1988). In search of subjectivity—one's own. *Educational Researcher*, 17(7), 17–21. <http://doi.org/10.3102/0013189X017007017>
- Piaget, J. (1952). *The Origins of Intelligence in Children*. (M. Cook, Trans.). New York: International Universities Press.
- Pineau, E. L. (1994). Teaching is performance: Reconceptualizing a problematic metaphor. *American Educational Research Journal*, 31(1), 3–25. <http://doi.org/10.2307/1163264>
- Powell, J. P., & Andresen, L. W. (1985). Humour and teaching in higher education. *Studies in Higher Education*, 10(1), 79–90. <http://doi.org/10.1080/03075078512331378726>
- Priestley, M., Edwards, R., Priestley, A., & Miller, K. (2012). Teacher agency in curriculum making: Agents of change and spaces for manoeuvre. *Curriculum Inquiry*, 42(2), 191–214. <http://doi.org/10.1111/j.1467-873X.2012.00588.x>
- Rachal, J. R. (2002). Andragogy's detectives: A critique of the present and a proposal for the future. *Adult Education Quarterly*, 52(3), 210–227. <http://doi.org/10.1177/0741713602052003004>
- Raudenbush, S. W., Rowan, B., & Cheong, Y. F. (1992). Contextual effects on the self-perceived efficacy of high school teachers. *Sociology of Education*, 65(2), 150–167. <http://doi.org/10.2307/2112680>
- Reeve, J. (2006). Teachers as facilitators: What autonomy - supportive teachers do and why their students benefit. *The Elementary School Journal*, 106(3), 225–236. <http://doi.org/10.1086/501484>
- Responsive Classroom. (2016). Principles & Practices. Retrieved March 21, 2016, from <https://www.responsiveclassroom.org/about/principles-practices/>

- Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools, and academic achievement. *Econometrica*, *73*(2), 417–458. <http://doi.org/10.1111/j.1468-0262.2005.00584.x>
- Rockoff, J. E. (2004). The impact of individual teachers on student achievement: Evidence from panel data. *The American Economic Review*, *94*(2), 247–252.
- Rosenholtz, S. J. (1989). *Teachers' Workplace: The Social Organization of Schools*. White Plains, NY: Longman.
- Roseth, C. J., Johnson, D. W., & Johnson, R. T. (2008). Promoting early adolescents' achievement and peer relationships: The effects of cooperative, competitive, and individualistic goal structures. *Psychological Bulletin*, *134*(2), 223–246. <http://doi.org/10.1037/0033-2909.134.2.223>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68–78. <http://doi.org/10.1037/0003-066X.55.1.68>
- Ryan, R. M., & Deci, E. L. (2013). Toward a Social Psychology of Assimilation: Self-Determination Theory in Cognitive Development and Education. In B. W. Sokol, F. M. E. Grouzet, U. Mueller, & U. Müller (Eds.), *Self-regulation and Autonomy: Social and Developmental Dimensions of Human Conduct* (pp. 191–207). New York: Cambridge University Press.
- Ryan, R. M., & Grolnick, W. S. (1986). Origins and pawns in the classroom: Self-report and projective assessments of individual differences in children's perceptions. *Journal of Personality and Social Psychology*, *50*(3), 550–558. <http://doi.org/10.1037/0022-3514.50.3.550>

- Ryan, R. M., & Powelson, C. L. (1991). Autonomy and relatedness as fundamental to motivation and education. *The Journal of Experimental Education*, 60(1), 49–66.
- Sachs, J. (2001). Teacher professional identity: Competing discourses, competing outcomes. *Journal of Education Policy*, 16(2), 149–161. <http://doi.org/10.1080/026809301116819>
- Saldaña, J. (2013). *The Coding Manual for Qualitative Researchers* (2nd ed.). Los Angeles: SAGE.
- Sarason, S. B. (1999). *Teaching as a Performing Art*. New York: Teachers College Press.
- Savery, J. R. (2015). Overview of Problem-Based Learning: Definitions and Distinctions. In A. (Andrew E. Walker, H. Leary, C. E. Hmelo-Silver, & P. A. Ertmer (Eds.), *Essential Readings in Problem-Based Learning* (pp. 5–15). West Lafayette, IN: Purdue University Press. Retrieved from http://nrs.harvard.edu/urn-3:hul.ebookbatch.PMUSE_batch:muse3467120151126
- Sawchuk, S. (2015, September 30). Long Beach Sets Course to Personalize PD Options. *Education Week*, 35(6), s2–s3.
- Sawyer, R. K. (2004). Creative teaching: Collaborative discussion as disciplined improvisation. *Educational Researcher*, 33(2), 12–20. <http://doi.org/10.3102/0013189X033002012>
- Schifter, D., & Fosnot, C. T. (1993). *Reconstructing Mathematics Education: Stories of Teachers Meeting the Challenge of Reform*. New York: Teachers College Press.
- Schneider, J. (2014). Rhetoric and practice in pre-service teacher education: The case of Teach For America. *Journal of Education Policy*, 29(4), 425–442. <http://doi.org/10.1080/02680939.2013.825329>
- Schultz, K., & Ravitch, S. M. (2013). Narratives of learning to teach: Taking on professional identities. *Journal of Teacher Education*, 64(1), 35–46. <http://doi.org/10.1177/0022487112458801>

- Seidman, I. (2006). *Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences* (3rd ed.). New York: Teachers College Press.
- Shernoff, D. J., & Csikszentmihalyi, M. (2009). Flow in Schools: Cultivating Engaged Learners and Optimal Learning Environments. In M. J. Furlong, R. Gilman, & E. S. Huebner (Eds.), *Handbook of Positive Psychology in Schools* (pp. 131–145). New York: Routledge.
- Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4–14. <http://doi.org/10.2307/1175860>
- Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1–22.
- Shulman, L. S., & Shulman, J. H. (2004). How and what teachers learn: A shifting perspective. *Journal of Curriculum Studies*, 36(2), 257–271. <http://doi.org/10.1080/0022027032000148298>
- Singer, J. A. (2004). Narrative identity and meaning making across the adult lifespan: An introduction. *Journal of Personality*, 72(3), 437–460. <http://doi.org/10.1111/j.0022-3506.2004.00268.x>
- Sloan, K. (2006). Teacher identity and agency in school worlds: Beyond the all - good/all - bad discourse on accountability - explicit curriculum policies. *Curriculum Inquiry*, 36(2), 119–152. <http://doi.org/10.1111/j.1467-873X.2006.00350.x>
- Smylie, M. A. (1989). Teachers' views of the effectiveness of sources of learning to teach. *The Elementary School Journal*, 89(5), 543–558. <http://doi.org/10.2307/1001721>
- Stanislavsky, K. (1969). *An Actor Prepares*. New York: Theatre Arts Books.
- St. Clair, R. (2002). *Andragogy Revisited: Theory for the 21st Century? Myths and Realities*. (ERIC Clearinghouse on Adult, Career, and Vocational Education No. 19). Washington,

- D.C.: Office of Educational Research and Improvement. Retrieved from <http://eric.ed.gov/?id=ED468612>
- The Origins Program. (2016). Origins History. Retrieved March 21, 2016, from <https://originsonline.org/about/origins-history>
- Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher Professional Learning and Development: Best Evidence Synthesis Iteration [BES]*. Wellington, New Zealand: Ministry of Education. Retrieved from https://www.educationcounts.govt.nz/__data/assets/pdf_file/0017/16901/TPLandDBESentireWeb.pdf
- TNTP. (2015). *The Mirage: Confronting the Hard Truth About Our Quest for Teacher Development*. New York: TNTP. Retrieved from http://tntp.org/assets/documents/TNTP-Mirage_2015.pdf
- Turner, J. C., Christensen, A., Kackar-Cam, H. Z., Trucano, M., & Fulmer, S. M. (2014). Enhancing students' engagement: Report of a 3-Year intervention with middle school teachers. *American Educational Research Journal*, 51(6), 1195–1226. <http://doi.org/10.3102/0002831214532515>
- Vaandering, D. (2014). Relational restorative justice pedagogy in educator professional development. *Curriculum Inquiry*, 44(4), 508–530. <http://doi.org/10.1111/curi.12057>
- Vansteenkiste, M., Simons, J., Lens, W., Sheldon, K. M., & Deci, E. L. (2004). Motivating learning, performance, and persistence: The synergistic effects of intrinsic goal contents and autonomy-supportive contexts. *Journal of Personality and Social Psychology*, 87(2), 246–260. <http://doi.org/10.1037/0022-3514.87.2.246>

- van Veen, K., Zwart, R., & Meirink, J. (2012). What makes teacher professional development effective? A literature review. In M. Kooy & K. van Veen (Eds.), *Teacher Learning that Matters: International Perspectives* (pp. 3–21). New York: Routledge.
- Waters, T. E. A., & Fivush, R. (2015). Relations between narrative coherence, identity, and psychological well-being in emerging adulthood. *Journal of Personality, 83*(4), 441–451. <http://doi.org/10.1111/jopy.12120>
- Wayne, A. J., Yoon, K. S., Zhu, P., Cronen, S., & Garet, M. S. (2008). Experimenting with teacher professional development: Motives and methods. *Educational Researcher, 37*(8), 469–479. <http://doi.org/10.3102/0013189X08327154>
- Webster-Wright, A. (2009). Reframing professional development through understanding authentic professional learning. *Review of Educational Research, 79*(2), 702–739. <http://doi.org/10.3102/0034654308330970>
- Webster-Wright, A. (2010). *Authentic Professional Learning: Making a Difference Through Learning at Work* (Vol. 2). Dordrecht, The Netherlands: Springer Netherlands.
- Wells, M. (2014). Elements of effective and sustainable professional learning. *Professional Development in Education, 40*(3), 488–504. <http://doi.org/10.1080/19415257.2013.838691>
- Wheelan, C. J. (2002). *Naked Economics: Undressing the Dismal Science* (1st ed.). New York: Norton.
- White, R. W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review, 66*(5), 297–333. <http://doi.org/10.1037/h0040934>
- Wilson, S. M., & Berne, J. (1999). Teacher learning and the acquisition of professional knowledge: An examination of research on contemporary professional development. *Review of Research in Education, 24*(1), 173–209. <http://doi.org/10.2307/1167270>

Yin, R. K. (2014). *Case Study Research: Design and Methods* (5th ed.). Los Angeles: SAGE.

Ziv, A. (1979). The teacher's sense of humour and the atmosphere in the classroom. *School Psychology International*, 1(2), 21–23. <http://doi.org/10.1177/014303437900100207>

Zwart, R. C., Korthagen, F. A. J., & Attema-Noordewier, S. (2015). A strength-based approach to teacher professional development. *Professional Development in Education*, 41(3), 579–596. <http://doi.org/10.1080/19415257.2014.919341>