

An Affinity for Learning: Teacher Identity and Powerful Professional Development

James Noonan¹ 

Journal of Teacher Education
1–12
© 2018 American Association of
Colleges for Teacher Education
Reprints and permissions:
sagepub.com/journalsPermissions.nav
DOI: 10.1177/0022487118788838
journals.sagepub.com/home/jte



Abstract

Drawing on interviews with a diverse sample of teachers, this study uses the frame of professional identity to interpret the heterogeneity among teachers' perceptions of professional development. Specifically, it examines how teachers' "anchoring beliefs" might be reflected in or refracted by their accounts of powerful professional learning. An analysis of three case studies of teacher identity and teacher learning reveals three distinct "learning affinities": for the what (content), the who (facilitation), and the with whom (community). This learning affinity framework may better model teachers' experiences of professional development and thus could point the way toward improved research and design.

Keywords

professional development, teacher beliefs, identity, teacher learning

From one perspective, professional development (PD) is a shared experience, with many teachers inhabiting the same learning environment and encountering the same material. Shared learning experiences are important from a policy implementation standpoint in that they help to foster coherence in instructional practice across classrooms, schools, or districts. 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 experience may be just another Tuesday for her colleague sitting a few feet away. What could help explain this variation? And what might a better understanding of this variation imply for PD design and policy?

One approach to answering these questions is to apply the analytic lens of teacher professional identity. An identity lens is promising given its attention to individual learners, including their past experiences and guiding beliefs and how they use them as filters through which to interpret their learning and with which to justify present and potential actions. Drawing on interviews with 25 teachers in which they reflected on their most powerful learning experiences (PLEs), I consider the extent to which teacher identity may emerge from or contribute to these learning experiences. It is my hope that the present study—with its inter- and intrapersonal approach to studying PD—may serve as both a complement and a contrast to the research orientation predominant in PD literature, which tends to focus more abstractly (and impersonally) on design elements and best practices.

Professional Development

Defined broadly and inclusively, PD may be understood as activities or relationships intended to support and develop

teachers' instructional practice. And yet PD activities vary widely in design, including 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 is seen by a broad cross-section of stakeholders—teachers, principals, policymakers—as essential for instructional improvement and student learning (see Borko, Elliott, & Uchiyama, 2002). One indicator of the enormous faith placed in the potential of PD to drive instructional improvement is the consistently high level of spending on teacher development. The teacher development organization TNTP (2015) studied three large U.S. urban districts and estimated that they spent on average US\$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 and corroborated by empirical research (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). Teachers, too, have long been dismayed by PD's failure to realize its potential (e.g., Calvert, 2016; Smylie, 1989). Speaking to preservice teachers in 2012, Secretary of Education Arne Duncan pegged

¹Harvard Graduate School of Education, Cambridge, MA, USA

Corresponding Author:

James Noonan, Harvard Graduate School of Education, 6 Appian Way, Cambridge, MA 02138, USA.

Email: james_noonan@mail.harvard.edu

the full cost of PD at US\$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.”¹

Decades of correlational and quasi-experimental research have resulted in many “best practice” frameworks that lay out instrumental PD design elements (e.g., Garet, Porter, Desimone, Birman, & Yoon, 2001; Guskey, 2003). Summarizing the features identified by this strand of research, Wayne, Yoon, Zhu, Cronen, and Garet (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). Unfortunately, evaluations of PD programs developed to align with these characteristics have been discouraging, showing small to null effects (e.g., see Hill, Beisiegel, & Jacob, 2013, p. 478). Encouragingly, teachers’ voices and perspectives are increasingly seen as critical to the study and design of PD (e.g., Hochberg & Desimone, 2010; Webster-Wright, 2009). In this vein, I privileged teachers’ perspectives and eschewed a familiar research design in which researchers chose well-regarded PD programs to study (e.g., Borko, 2004; Wilson & Berne, 1999). I sought to demonstrate, as one of my participants urged, “respect for the anecdotal.”

Professional Identity and Teacher Beliefs

Generally understood as teachers’ conceptions of self and their role, teacher professional identity is formed and reformed over time and represents a diverse range of influences. But even with agreement among researchers that better understanding the concept has promising implications for improving teacher practice (Schultz & Ravitch, 2013), the definition of “teacher identity” has proven to be as dynamic as identity itself, subject to continuous refinement and reconceptualization. Beijaard, Meijer, and Verloop (2004) reviewed existing literature and proposed four common features of teacher identity. First, it emerged from an *ongoing process*. Second, it was *socially situated*, a function of individuals’ relationships and the school culture in which they worked. Third, it was *layered*, comprising numerous “subidentities that more or less harmonize” (p. 122). And finally, identity formation was an active and constructivist process, emerging out of teachers’ sense of *agency*.

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, 2002). The *professional* domain covered aspects unique to teaching relative to other professions—for example, requirements related to PD—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 suggests 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 United States. 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 (see Day, Elliot, & Kington, 2005). 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” (p. 701). In line with this assertion, teachers’ meaning-making about their work—including their perceptions of and responses to professional learning—are filtered through the prism of their own experiences and beliefs (e.g., Hoy, Davis, & Pape, 2006; Korthagen, 2004).

To aid in the interpretation of teachers’ sense-making, it is important to understand more about the formation and continuing influence of their belief systems. Richardson (2003) observed that, within domains of teacher education and teacher learning, individual beliefs were “in large part . . . thought of as the focus of change” (p. 4). Similarly, in constructivist theories of adult development, learning is considered an active process of interpreting the world where beliefs tend to be regarded as obstructions or as objects to be interrogated and overcome (Kegan, 1994; 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* to facilitate transformative learning.

In my analysis, I adopt the term *anchoring beliefs* to describe teachers’ closely held principles about teaching and learning and how teachers get better. I drew the term from the literature on entrepreneurship (Krueger, 2007), where—as in the developmental literature—it denoted deep beliefs that obstructed change and must be overcome. 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 psychological concepts of *constructs* (Kelly, 1955) or *schema* (Lochman, Holmes, & Wojnarowski, 2008), anchoring beliefs as I interpreted them were a durable but permeable filter through which people saw and made sense of the world. In this sense, they reflected and refracted teachers’ identities.

To better understand the relationship between teachers' identities and their experiences of PD, I sought to answer the following research questions:

1. **Research Question 1:** How do teachers' accounts of professional learning reflect or contradict the "anchoring beliefs" underlying their professional identities?
2. **Research Question 2:** What implications for PD design and policy can be drawn from such alignments or misalignments?

Method

The present study was 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 PD, I conducted semistructured interviews with 25 teachers in which they provided narrative accounts of their most PLE. 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 connections between professional learning and its impact on practice. Surveying findings from the full sample, I was struck by the apparent heterogeneity across several dimensions of PD best practices. However, while such heterogeneity poses a challenge to consensus best practices, it is well in line with an identity frame that acknowledges and seeks to account for individual differences. From the full sample, I selected three cases that offered instructive contrasts to each other to explore alignment with one's professional identity as a way to explore powerful professional learning (Yin, 2014).

Sample

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 (from pre-kindergarten to Grade 12) and years of experience (from 4 years to more than 30). I sought to recruit a sample stratified according to grade level taught (primary and secondary) and years of experience (between 3 and 5 years and 6 or more years).² 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 more representative sample than if I had relied solely on personal and professional "word of mouth" recruitment. I did not turn down any teachers responding to my call for participants. In my final sample, there were more women than men (20 and 5), fewer elementary teachers than middle and high school teachers (11 and 14), and more experienced teachers than

novices (19 and 6). With the exception of grade level—which is evenly split between K-8 and high school—trends in my sample reflected national trends (National Center for Education Statistics, 2014).

Data Collection

I conducted semistructured interviews as a way for participants to "reconstruct and reflect" on one PLE (Seidman, 2006). Focusing on a single experience allowed me to better account for the 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." All interviews were conducted in person and lasted between 45 and 90 min. In addition to transcribing interviews in full, I drafted context memos immediately following each interview in which I recorded my observations participants' demeanor, reflected on my 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

In subsequent analysis, I first drafted "identity memos" for each participant to document their stated 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" and then used the beliefs emerging from these memos as an interpretive lens on their accounts of the learning experiences they identified as powerful (and/or negative). In so doing, I considered the extent to which these accounts reflected or challenged these "anchoring beliefs." However, I concede that my distillation of participants' anchoring beliefs emerged from focused conversations about PD, so it is possible I was not able to account for the full complexity of their beliefs about teaching and learning and instead captured primarily those beliefs that supported or were evident in discrete learning experiences.

As Yin (2014) recommended for explanation building across multiple cases, I approached this study with an initial "explanatory proposition" regarding teachers' perceptions of powerful learning, positing that teachers' anchoring beliefs about teaching and improvement would be reflected in the format or content of their PLEs. 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.

Limitations

As discussed above, my data are cross-sectional and thus unable to fully account for the nuance of professional

identity and the ways that identity evolves over time. Given that identity formation is an ongoing process, the findings in this article are bound by participants' beliefs and identities as they existed when they were interviewed; their reflections on the past are necessarily filtered through their present beliefs. Related to this, the retrospective self-reported nature of the data may be colored by participants' biases or blurred by the haze of memory. For that matter, as a former participant in and facilitator of PD, I too came to this study colored by my own experiences with professional learning and their accompanying biases (Peshkin, 1988). Finally, I concede that I cannot make claims beyond the lived experiences of the relatively small number of teachers participating in this study. Future research, which I discuss in more detail at the end of the article, could be used to corroborate or contradict the experiences analyzed in this article.

Results and Discussion

Teachers' accounts of powerful PD in this study were dissonant with consensus features of "effective" PD. The format of learning experiences included presentations from content experts, teacher-led reflective inquiry groups, and intensive trainings on prescriptive programs and curricula. They lasted from 2 hours to 8 years. They focused on subject area content and general pedagogy. Searching for patterns within this heterogeneity, I looked across districts, grade-levels, and years of experience. I found some empirical evidence for differences along these lines—for example, less experienced teachers who cited prescriptive curricula as especially powerful, in line with research on the high "cognitive load" among novices (Moos & Pitton, 2014)—but there were also notable exceptions to these patterns, including the 25-year veteran who talked rapturously about a 1-day prescriptive workshop on writing conferences.

The coherence that was elusive when looking *across* individuals came into focus when looking *within* individuals. As noted above, teacher identity is a dynamic attribute, evolving over time and responsive to context. In this study, teachers were not only discussing the present; they were also reflecting on the past. Given this, one might expect to find alignment between their stories and their current beliefs. And indeed, leaving aside two cases in which I did not have sufficient data to determine either anchoring beliefs or alignment, in 18 of 23 cases in my analytic sample there was alignment between participants' beliefs and their PLEs. The five nonaligned cases seemed to be reflections of identity's continuously evolving nature: what teachers said they believed were not reflected in their recollections of past experiences, suggesting their present beliefs had evolved beyond their fond memories.

In representing alignment between teachers' identity and their professional learning experiences for analysis, I selected three cases that served as illuminating contrasts, thus highlighting the varying shapes that alignment could take.

Learning Affinities: The What, the Who, and the With Whom

The following cases help to illustrate how the domain of teacher identity can be useful in interpreting discrete professional learning experiences. Specifically, each case represents a unique *learning affinity*, defined as a disposition toward learning experiences that either contributes to or emerges from one's professional identity. In this article, I present three learning affinities: the *what*, the *who*, and the *with whom*. Briefly, teachers who identified closely with their subject matter content may have an affinity for content-focused learning experiences (the *what*). Similarly, teachers who identified closely with pedagogical expertise may have an affinity for models of what they consider exemplary teaching (the *who*). And finally, teachers who identified closely as members of a professional community of practice may have an affinity for interdependent exchanges of expertise (the *with whom*). While representative of my sample, these affinities are not intended to be comprehensive of the teaching profession as a whole nor, for that matter, are they necessarily mutually exclusive of each other. Rather, I present them here as distinct and unitary concepts to emphasize their potential utility as lenses for interpreting teachers' experiences of powerful learning.

Within each case, I offer relevant personal and professional background, identify the anchoring beliefs and PLEs, and present teachers' sense-making about their learning experiences in light of these beliefs.

Case 1: "A Philosophy About Teaching Math" (the What)

Brynn was in the middle of her fifth year teaching seventh- and eighth-grade math. For her, teaching—and teaching math, specifically—was more like a calling than a job. Describing herself proudly as a "math nerd," Brynn considered it her mission to help 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 . . . [but] kids don't connect to that, no one connects to that. . . . 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 have to feel that making mistakes doesn't mean that we're done, we're bad at math.

Professional learning in Brynn's district 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 teachers were given material they could use in

their lessons. As a new teacher, Brynn found the meetings helpful, but over time she came to see them as repetitive.

The PLE Brynn described was similar in design to department meetings: a series of workshops in which math teachers were given problems and worked through them. Brynn acknowledged as much and tried to work through this apparent contradiction, concluding that the difference lay in what they prioritized. The workshops she found so powerful were designed and led by a researcher and consultant named Evan Jones³ and had more of what Brynn called a “pure math” focus, encouraging teachers to engage deeply with the math and become more proficient. In contrast, the department meetings seemed to view math more instrumentally and emphasized proper use and pedagogy. In the Jones workshops, Brynn said, tasks were less prescriptive and more interactive. As she put 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?”

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 Evan Jones 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 . . . [but] 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 math*.

In other words, Brynn had a strong anchoring belief that *teaching math—as with other disciplines—required a depth and mastery of content knowledge*. Her belief was consonant with numerous researchers’ findings (Bransford, Brown, & Cocking, 2000; Shulman, 1986), including a considerable body of research on teachers’ content and pedagogical content knowledge specifically related to math (e.g., Ball, Thames, & Phelps, 2008; Hill, Rowan, & Ball, 2005). And yet, few teachers I spoke to internalized this conclusion as deeply as Brynn. Her convictions about mathematical content knowledge were infused throughout her narratives about the Jones courses and 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. Brynn said,

I think it’s really hard to explain math to kids if you don’t . . . understand it [well] 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 participants’ mistakes, 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.”

The courses involved teachers sitting together at tables and working through a problem set handed out by the facilitators. The problems were strategically chosen to be what Jones 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 circulated and asked probing questions about their techniques, encouraging them to solve problems in different ways and selecting teachers to present their work to the whole group. According to Brynn, the choices about whom 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.” (This method of instruction, while novel to many U.S. teachers, has long been typical in Japanese classrooms; Hiebert et al., 2003.)

In any professional learning experience, individual teachers may find a variety of features appealing or off-putting. 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 toward other aspects, including the interaction with her peers (the *with whom*) and the pedagogy of the facilitators (the *who*). Even though the courses were structured such that teachers sat at tables and occasionally worked together, collaboration and collegiality were not what Brynn found most valuable. If anything, she wanted more time on the math and less time for group reflection. 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:

[Reflection] turns into this kind of meaningless process where . . . 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 Jones and his co-facilitators made regarding the types of math problems and the way they orchestrated teachers’ sharing their work. But she also remembered the facilitators (including Jones) 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 remembered with disdain one facilitator explaining what the word “conjecture” meant and thinking, “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.’”

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 her district, 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 courses—for example, being more strategic about students she chose to show their work and the way she talked to students about sharing mistakes—as well as a new repertoire of Jones’s “low threshold, high ceiling” problems.

To these takeaways, I would add a third: the experience of joy. Brynn enjoyed 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 she loved, also presented an opportunity for her to reflect (individually) on how her own students experienced math. “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 teachers in my sample, 13 of 25 reported PLEs that were content-focused, but in most of those cases teachers did not justify their choices primarily because of the content. Such singularity might suggest that Brynn was an exceptional case, but I think that the clarity of her convictions and her determination to seek out professional learning experiences that contributed 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 Jones’s courses, which in turn helped to preserve and sustain her sense of mission.

Case 2: “Teaching Is Performance” (the Who)

Alex was completing his 16th year teaching middle school social studies. Unlike Brynn, Alex’s route to teaching was decidedly not mission-driven. Shrugging off his undergraduate degree in American Studies, he said,

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.” It was never like that for me.

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 before pivoting 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.” Asked for an example, Alex offered his fearlessness about “looking ridiculous,” which he claimed was especially valuable teaching middle school where students are so “self-conscious,” adding, “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 one of his anchoring beliefs about teaching, Alex concluded, “*A lot of teaching is performance.*”

Alex’s view of 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, opening it up to considerable critique (e.g., see Sawyer, 2004). Despite this, the quality of teacher performance—what I am calling the *who*—seemed central to Alex’s assessment of his PLE.

Alex’s PLE was a 5-day workshop at the beginning of the summer and open to all middle school teachers in his district. Teachers were strongly encouraged to attend, but it was not required. The workshop was an introduction to “Community Circle,” a program for launching an “advisory” structure and targeted specifically toward early adolescents. The facilitator was Trey Gordon, principal of a Midwestern charter school. The quality of Trey’s facilitation stood out prominently in Alex’s account of the experience:

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 of it is training you on these circles that you do with kids, different types of greetings and sharing activities. . . . and he modeled *everything*. . . . 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 4 times in six sentences. Searching for a concrete way to illustrate the intangible quality of the performance, Alex talked about modeling and added that Trey 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 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 factors that contributed to his positive assessment of the Community Circle training: his baseline low expectations for PD generally, a dawning realization that the content was relevant to his work, and a deep admiration for Trey's facilitation. First, like many teachers, Alex held PD in low esteem. His reasoning appeared to be that his day-to-day experience was more instructive than what he could learn through formal PD, which he characterized as "a lot of hot air." Alex further observed that his expectations tended to vary depending on whether he was attending what he called "content-based" PD or "pedagogical" PD like Community Circle. He explained, "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.'" In assessing pedagogical PD, on the contrary, Alex tended to have higher standards that the pedagogy would be good, but these higher standards were also harder to meet because he was measuring them against his own expertise. With this in mind, Alex was customarily wary at the beginning of the Community Circle 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 Trey's performance as a facilitator. Alex noticed Trey's facilitation skills early, even before the first day's session began. "We were all coming in, sort of mingling, chatting," Alex recalled,

and he was just sitting there looking around. And at a certain point we all realized, like, he was our facilitator and . . . giving us his nonverbal cue that he was looking to get all of our attention . . . 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 Trey's facilitation or it may have been a scripted part of this 5-day workshop (and thus anyone in Trey's role would have done the same thing). But in either case, Alex further recognized in Trey a deep comfort with adults.

As evidence of Trey's ease facilitating adults, Alex pointed to his "*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 went up to a colleague and gave a gentle elbow, like, "Get out of my way!" And I was elbowing past her and Trey 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 schooler, might have been seen as condescending, in much 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 Trey's pedagogical strategies, I wondered whether the respect he felt was born out of the disciplined perception of a teacher, leading him to interpret Trey's actions through the prism of his own identity and the role they shared. Having acknowledged and positively assessed Trey's skill, Alex saw him as a fellow teacher and thus 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. Asked what made Trey 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.'"

In comments like these, Alex seemed almost to be describing a more mature version of his own fearlessness, an ease with discomfort. In Trey, Alex appeared to see a better version of himself. In the 3 years since the workshop, middle school teachers at Alex's school had reorganized their schedules to accommodate new advisory periods anchored by many of the Community Circle 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 Trey 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 used his authority to have students reflect on their choices and behavior. Alex described the shift this way: "It's like if they've misbehaved, then [the students] need to do the reflecting. You don't sit there and lecture to them about the topic. Make them do all the work. And that really stuck with me." It was a description that seemed to mirror his impressions of Trey's light-touch facilitation—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 Trey's.

Case 3: "The Relationship Always Matters" (the *With Whom*)

Carolyn said she took a "roundabout" route to teaching, but I think it would be more apt to say that she took a highly

deliberate and personalized route. Rather than following one of the conventional paths of entry to teaching, Carolyn made a number of unusual but strategic decisions responding to clear gaps she identified in her emerging capacity as a teacher. In hindsight, these decisions reflected a durable belief Carolyn had in the value of reciprocal relationships for learning.

As an English major at a small liberal arts college in the mid-1990s, Carolyn felt called to teach. But with no education degree programs at her school, she cobbled together relevant coursework and was accepted to Teach For America (TFA), through which she taught fourth grade in rural Mississippi for 2 years. During her time in Mississippi, Carolyn was all too aware of her novice status: “I was not great at it,” she said. “I think that I tried really hard, but it really convinced me that I needed to persist and that I needed to become a much better teacher.” Initially wary of the “idealized representations” of good teaching she imagined she would encounter in graduate school, Carolyn instead decided 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.” Getting a job in a suburban first grade classroom, Carolyn viewed her year as a paraprofessional as a chance to go back and redo her student teaching.

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 develop the knowledge and skills valued by more experienced members (p. 29). During her year as a paraprofessional (and then another 5 years teaching 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 through her relationships with mentors and peers, Carolyn was forging her identity as a teacher. And as she learned how to see herself as a teacher, she enacted that identity through her practice and moved from peripheral toward full participation. Calculated roughly, this shift took 8 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 was Carolyn hired as a full-time first grade teacher in her current school, where she has remained for the last 8 years.

Her anchoring belief in the central role of relationships was a consistent theme in Carolyn’s accounts of powerful and negative professional learning. Her PLE was multiyear participation on a voluntary districtwide 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. Working with units of study developed by Lucy

Calkins—a professor at Teachers College and founder of the widely adopted Readers and Writers Workshop—Carolyn explained that they were working to make the units more accessible for teachers. Her motivation for joining the committee emerged from her own experience trying to better understand the curriculum and an altruistic impulse.

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, the committee met to review the standards underpinning the curriculum and discuss the format the adapted units would take. In so doing, this 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 also responsive to the varied needs and capacities of many different teachers. An active participant in these discussions, Carolyn described a reciprocal exchange, saying that she “never felt like I needed to hold back” and that district leaders “were open to hearing [feedback] . . . 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 writing of the units themselves, which happened in pairs. Carolyn worked with Leah, a first-grade teacher at a different school. What made their collaboration so powerful for Carolyn was the way their deliberations challenged some of her assumptions about good teaching. Their spirited exchanges stood out in part because Carolyn so often felt unchallenged:

A lot of times people were like, “Okay, Carolyn is working really hard. She is fine. She is good. She’s got it.” . . . 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, 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 was the need for them to reconcile their loyalties to two different writing curricula—Readers Workshop in Leah’s case and Literacy Collaborative (LC) in Carolyn’s. In Readers Workshop, students read independently for up to 45 min while the teacher conferred with students individually or in groups. LC, 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 teachers were using a mix of the two programs. As a result, the units of study 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. “It’s like who I am as a teacher,” she explained. And so in their work together, Leah and Carolyn had to read 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 her attachment to LC and to try to better understand her resistance to the workshop model. For example, she remembered asking herself,

Do you want to do [LC] because . . . you have it in the bag and you’re good at it and you 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?

As part of the work, Carolyn and Leah had long searching conversations. To help answer some of her questions, Carolyn visited Leah’s classroom to observe her Readers Workshop and was impressed. Seeing it in action warmed Carolyn to the ideas behind Workshop and led her to conclude that the roots of her resistance were perhaps more systemic, related to the high cost of resources and training associated with shifting to a workshop model. Specifically, libraries would need to grow exponentially to accommodate 45 min of independent reading from students who were reading short “just-right” books. Carolyn said, “I would need to have for my lowest readers 10 or 20 books to last the 45 minutes . . . but I didn’t have it in my classroom.” To help teachers make the shift, Carolyn believed, the district would need to make a “massive shift” in how they allocated resources, and she was concerned that such an investment was not forthcoming.

Having concluded that her resistance to Readers Workshop was not her “just being lazy” and that she did in fact like a lot of things about it, Carolyn was able to engage more fully in the writing process with Leah. Her epiphanies also led her to make some concrete and positive changes to the way she taught, blending the best of both models. 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.” Specifically, such connections counteracted the competitive dynamics of school assignment in her district that she thought 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. “If you think about it,” Carolyn explained,

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 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 she was working but people like herself 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). The influence of motivation, especially, marks her PLE as primarily an individual one. It is hard to say whether other teachers would have felt motivated to engage in the curriculum development tasks as enthusiastically as Carolyn and her colleagues. Just as Brynn was uniquely motivated by her convictions about math and Alex was uniquely inspired by a model teacher, Carolyn’s beliefs about relational learning and her identity as an institutional guardian were instrumental in how she interpreted her PLEs.

Implications

I introduced this article observing the variation across teachers’ experiences of professional learning and asking how to make sense of this variation. The concepts of teacher identity and anchoring beliefs offered an instructive analytical lens, with teachers’ retrospective accounts of powerful learning generally aligning with their current beliefs. Such alignment is unsurprising, because identity formation is a process meant to better align one’s values with one’s behavior and vice versa.

However, as uniquely individual as these beliefs may be, the learning affinity framework suggests these beliefs may also fall into some more general categories. Like Brynn, many teachers come to teaching with a deep passion for their disciplines (the *what*). Recall that Carolyn was an elementary teacher who seemed to have an especially strong attachment to reading and writing. In addition, Alex—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 Trey may have been “intangible,” but another teacher in this study suggested that learners’ positive perceptions of facilitation may, in some cases at least, have to do more with the facilitators’ care or regard for the learners. Finally, Carolyn’s affinity for learning from colleagues (the *with whom*) was widely shared in this sample. Indeed, 13 of 25 teachers expressed anchoring beliefs that were variations on the idea that constructive relationships were vital for improvement.

Taken together, the learning affinity framework challenges conventional wisdom about PD in important ways. Most fundamentally, it challenges an assumption implicit in many macro-level PD policies that there is one best way to design effective PD. Hochberg and Desimone (2010) advised designers and policymakers to “be considerate of teachers’ backgrounds and existing knowledge and beliefs” (p. 100), and the accounts shared by teachers in this study help validate this recommendation, reminding us that different people value different things—for example, a deep understanding of

calculus—and that these preferences are not incidental. Rather, for teachers like the ones profiled above, they emerge from deeply held and motivating convictions. In this way, the learning affinity framework also helps explain the null findings of PD designed in line with consensus best practice elements. Put plainly, PD 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 them on what they most want to learn, offering differentiated choices, and giving them some degree of agency over their PD.

In addition, 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 teachers’ decision-making—may not always be apparent. For some participants, the reflective and metacognitive process of being interviewed about their beliefs and retelling a story about their professional learning experiences offered an occasion to reappraise their experiences in light of the ways their identity evolved over time (e.g., McLean, Pasupathi, & Pals, 2007). Beliefs that may have been tacit became visible. In making beliefs visible, these teachers experienced their anchoring beliefs similarly to the ways Krueger (2007) and Mezirow (1997) imagined: as objects to be amended or transformed. Similar opportunities—formal or informal—for teachers to tell stories about and reflect on their experiences with professional learning might help them clarify what they believe. Such awareness could further help teachers seek out PD better aligned with their identities or respond substantively if and when they are asked about their professional learning needs.

Finally, the individual learning affinities identified in this study have some foundation in empirical research, but the framework as a whole—the notion that teachers’ beliefs and identities are reflected and refracted by their experiences of professional learning—could be corroborated by further study. Using surveys, either alone or as part of a mixed methods study, could examine a larger sample and track changes over time in identity and perceptions about professional learning. Previously validated instruments about identity could be adapted to include questions about PD (e.g., Beijaard, Verloop, & Vermunt, 2000). In addition, subsequent research could explore in more detail the relationship of powerful learning and professional identity to teacher practice and student learning.

Conclusion

Each teacher—like each student in their classrooms—brings to their learning experiences a unique set of 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, Taylor, Tyler, & Laski, 2016), and still others leveraging social media to meet their varied learning needs (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—will be critical toward ensuring teachers’ continued growth and improvement.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Notes

1. See <http://neatoday.org/2012/07/10/how-should-we-support-new-teachers-arne-duncan-hears-from-nea-student-members/>.
2. The names of all teachers in this article are pseudonyms.
3. As with participants, all PD provider names and organizations are pseudonyms.

ORCID iD

James Noonan  <https://orcid.org/0000-0002-1517-5079>

References

- 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. doi:10.1177/0022487108324554
- Beijaard, D., Meijer, P. C., & Verloop, N. (2004). Reconsidering research on teachers’ professional identity. *Teaching and Teacher Education, 20*(2), 107-128. doi: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. doi:10.1016/S0742-051X(00)00023-8
- Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher, 33*(8), 3-15. doi: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. doi:10.1016/S0742-051X(02)00054-9
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.). (2000). *How people learn: Brain, mind, experience, and school: Expanded edition*. Washington, DC: National Academy Press.
- Buchanan, R. (2015). Teacher identity and agency in an era of accountability. *Teachers and Teaching, 21*(6), 700-719. doi:10.1080/13540602.2015.1044329

- Calvert, L. (2016). *Moving from compliance to agency: What teachers need to make professional learning work*. Oxford, OH: Learning Forward. Retrieved from <https://learningforward.org/docs/default-source/pdf/teacheragencyfinal.pdf>
- Carpenter, J. P., & Krutka, D. G. (2015). Engagement through microblogging: Educator professional development via Twitter. *Professional Development in Education*, 41(4), 707-728. doi:10.1080/19415257.2014.939294
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Los Angeles, CA: SAGE.
- 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/nsdc-study2009.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. doi:10.1016/j.tate.2005.03.001
- 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. doi:10.3102/00028312038004915
- Guskey, T. R. (2003). Analyzing lists of the characteristics of effective professional development to promote visionary leadership. *NASSP Bulletin*, 87(637), 4-20. doi:10.1177/019263650308763702
- 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>
- Hill, H. C., Beisiegel, M., & Jacob, R. (2013). Professional development research consensus, crossroads, and challenges. *Educational Researcher*, 42(9), 476-487. doi: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.
- Hochberg, E. D., & Desimone, L. M. (2010). Professional development in the accountability context: Building capacity to achieve standards. *Educational Psychologist*, 45(2), 89-106. doi:10.1080/00461521003703052
- Hoy, A. W., Davis, H., & Pape, S. J. (2006). Teacher knowledge and beliefs. In P. A. Alexander & P. H. Winne (Eds.), *Handbook of educational psychology* (2nd ed., pp. 715-737). Mahwah, NJ: Lawrence Erlbaum.
- Kegan, R. (1994). *In over our heads: The mental demands of modern life*. Cambridge, MA: Harvard University Press.
- Kelly, G. (1955). *The psychology of personal constructs* (1st ed.). New York, NY: W.W. Norton.
- Korthagen, F. A. J. (2004). In search of the essence of a good teacher: Towards a more holistic approach in teacher education. *Teaching and Teacher Education*, 20(1), 77-97. doi:10.1016/j.tate.2003.10.002
- Krueger, N. F. (2007). What lies beneath? The experiential essence of entrepreneurial thinking. *Entrepreneurship Theory and Practice*, 31(1), 123-138. doi:10.1111/j.1540-6520.2007.00166.x
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, UK: Cambridge University Press.
- Lochman, J. E., Holmes, K. J., & Wojnarowski, 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.
- Lortie, D. C. (2002). *Schoolteacher: A sociological study* (2nd ed.). Chicago, IL: The University of Chicago 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. doi:10.1177/1088868307301034
- Mezirow, J. (1997). Transformative learning: Theory to practice. *New Directions for Adult & Continuing Education*, 1997(74), 5-12. doi: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. doi:10.1080/13540602.2011.602059
- Moos, D. C., & Pitton, D. (2014). Student teacher challenges: Using the cognitive load theory as an explanatory lens. *Teaching Education*, 25(2), 127-141. doi:10.1080/10476210.2012.754869
- National Center for Education Statistics. (2014). *Digest of education statistics, 2014*. Retrieved from https://nces.ed.gov/programs/digest/d14/tables/dt14_209.10.asp
- 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.
- Peshkin, A. (1988). In search of subjectivity—One's own. *Educational Researcher*, 17(7), 17-21. doi:10.3102/0013189X017007017
- Richardson, V. (2003). Preservice teachers' beliefs. In J. Rath & A. C. McAninch (Eds.), *Teacher beliefs and classroom performance: The impact of teacher education* (Vol. 6, pp. 1-22). Greenwich, CT: Information Age Publishing.
- 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. doi:10.3102/0013189X033002012
- Schultz, K., & Ravitch, S. M. (2013). Narratives of learning to teach: Taking on professional identities. *Journal of Teacher Education*, 64(1), 35-46. doi:10.1177/0022487112458801
- Seidman, I. (2006). *Interviewing as qualitative research: A guide for researchers in education and the social sciences* (3rd ed.). New York, NY: Teachers College Press.
- Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4-14. doi:10.2307/1175860
- 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. doi: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. <https://doi.org/10.2307/1001721>

- TNTP. (2015). *The mirage: Confronting the hard truth about our quest for teacher development*. New York, NY: Author. Retrieved from http://tntp.org/assets/documents/TNTP-Mirage_2015.pdf
- 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. doi:10.3102/0013189X08327154
- Webster-Wright, A. (2009). Reframing professional development through understanding authentic professional learning. *Review of Educational Research*, 79(2), 702-739. doi:10.3102/0034654308330970
- 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. doi:10.2307/1167270
- Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Los Angeles, CA: SAGE.

- Yoon, K. S., Duncan, T., Lee, W.-Y., Scarloss, B., & Shapley, K. L. (2007). *Reviewing the evidence on how teacher professional development affects student achievement* (Issues & Answers Report, REL 2007-No. 033). Washington, DC: Institute of Education Sciences, U.S. Department of Education. Retrieved from <http://eric.ed.gov/?id=ED498548>

Author Biography

James Noonan, EdD, is a research affiliate with the Justice in Schools project at the Harvard Graduate School of Education where he pursues questions related to teachers' experiences of learning, teacher identity and agency, and school and district quality. In addition, he is project director with the Massachusetts Consortium for Innovative Education Assessment (MCIEA), where he oversees the development and piloting of a holistic framework for measuring school quality in partnership with six school districts across Massachusetts.