Executing Content:

Instructional Guidance Infrastructures and Conceptions of Teacher Professionalism

Clare Buckley Flack

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ABSTRACT

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In response to increasing expectations for college and career readiness, networks for school improvement have been codifying instructional guidance infrastructures (IGIs) for teachers, expanding and aligning components such as prescribed curricula, assessments, coaching, and professional development. Historically, teaching in the United States has lacked infrastructure. Teachers who have done ambitious work have done so by placing an enormous burden upon themselves, and more prescriptive IGIs may relieve some of this burden. However, the occupational control exercised by an IGI may constrain teacher autonomy. This comparative case study documents rationales for IGI expansion at two purposefully-selected network in a large urban district, developing profiles of their IGIs, and exploring implications for the occupational role of teachers. Findings emerge from iterative analysis of 42 semi-structured interviews and 51 hours of observation. Each network staff’s sensemaking around their respective instructional guidance infrastructures (IGIs) reflected competing conceptions of teacher professionalism. Denizen Charter Management Organization promulgated a more prescriptive IGI that included minimal support for adaptation and tightly aligned accountability mechanisms. Conversely, Metropolitan Schools, a non-profit organization, implemented a more discretionary IGI with flexible curricular frameworks. Adoption of their IGI was voluntary with fewer accompanying accountability structures. Denizen’s more prescriptive IGI reflected the
new professionalism (in which bureaucracies routinize the knowledge base of discretionary work) while Metro’s more discretionary IGI aligned more with classic professionalism (characterized by abstract knowledge, authority over practice, and autonomy). Distinct conceptions of the knowledge base for teaching undergirded these differences. An emphasis on pedagogical content knowledge and content-area pedagogical practices at Metro reflected an understanding of teachers as experts. In contrast, Denizen’s emphasis on content-agnostic pedagogical knowledge and generic instructional moves reflected a performative model of teaching. However, elements of competing conceptions of professionalism co-existed within each IGI.
# TABLE OF CONTENTS

LIST OF TABLES ............................................................................................................................ VI

LIST OF FIGURES .......................................................................................................................... VIII

ACKNOWLEDGMENTS .................................................................................................................. IX

CHAPTER ONE: INTRODUCTION ................................................................................................. 1

Prescriptive Instructional Guidance and Teacher Professionalism .............................................. 5

Research Questions ...................................................................................................................... 10

Instructional Guidance Infrastructures ....................................................................................... 12

Previous Research ....................................................................................................................... 15

IGIs and Teachers’ Work .............................................................................................................. 23

Contribution to the Literature .................................................................................................... 26

Chapter One Conclusion ............................................................................................................. 27

Organization of the Dissertation ................................................................................................. 29

CHAPTER TWO: CONTEMPORARY SHIFTS IN PROFESSIONALISM ................................. 31

Classic Professionalism ............................................................................................................... 32

Teaching: A Semi-Profession ...................................................................................................... 34

The New Professionalism ............................................................................................................ 40

The Routinization of Discretionary Work ................................................................................. 41

The Expansion of Accountability Systems ................................................................................... 43

Teaching in the Era of the New Professionalism ....................................................................... 46

Chapter Two Conclusion ............................................................................................................ 52

CHAPTER THREE: CONCEPTUAL FRAMEWORK .................................................................. 54
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATIONALIZING LOGICS OF PROFESSIONALISM</td>
<td>54</td>
</tr>
<tr>
<td>Knowledge</td>
<td>55</td>
</tr>
<tr>
<td>Authority</td>
<td>60</td>
</tr>
<tr>
<td>Autonomy</td>
<td>62</td>
</tr>
<tr>
<td>INSTRUCTIONAL GUIDANCE INFRASTRUCTURES</td>
<td>65</td>
</tr>
<tr>
<td>Operationalizing IGI Dimensions</td>
<td>67</td>
</tr>
<tr>
<td>IGI Dimensions and Logics of Professionalism</td>
<td>79</td>
</tr>
<tr>
<td>SENSEMAKING AND SENSEGIVING</td>
<td>83</td>
</tr>
<tr>
<td>Sensemaking in Organizations</td>
<td>84</td>
</tr>
<tr>
<td>Conceptual Model of the Sensemaking Process</td>
<td>86</td>
</tr>
<tr>
<td>Analytical Approach to Sensemaking and Sensegiving</td>
<td>87</td>
</tr>
<tr>
<td>Analytical Value of the Sensemaking Perspective</td>
<td>88</td>
</tr>
<tr>
<td>THE PLACE OF SENSEMAKING IN THE CONCEPTUAL FRAMEWORK</td>
<td>90</td>
</tr>
<tr>
<td>CHAPTER THREE CONCLUSION</td>
<td>92</td>
</tr>
<tr>
<td>CHAPTER FOUR: METHODOLOGY</td>
<td>93</td>
</tr>
<tr>
<td>RESEARCH DESIGN</td>
<td>93</td>
</tr>
<tr>
<td>CASE SELECTION</td>
<td>96</td>
</tr>
<tr>
<td>Study Context</td>
<td>98</td>
</tr>
<tr>
<td>DATA</td>
<td>100</td>
</tr>
<tr>
<td>Interview Data</td>
<td>102</td>
</tr>
<tr>
<td>Observation Data</td>
<td>107</td>
</tr>
<tr>
<td>DATA ANALYSIS</td>
<td>114</td>
</tr>
<tr>
<td>Coding</td>
<td>116</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table 3.1. Logics of Teacher Professionalism.................................................................55
Table 3.2. Dominant Framework of the Knowledge Base for Teaching............................57
Table 3.3. Elements and Components of IGIs...............................................................66
Table 3.4. Summary of Framework for IGI Analysis......................................................68
Table 3.5. Typology for Lesson Plan Specificity.............................................................71
Table 3.6. Operationalization of IGI Power.....................................................................75
Table 3.7. Educative Features of Lesson Plans..............................................................79
Table 3.8. Relationships of IGI Dimensions to Professionalism Constructs.........................82
Table 4.1. Comparison of Denizen and Metro.................................................................99
Table 4.2. Interview Informants at Denizen................................................................104
Table 4.3. Interview Informants at Metro (and Related Entities)....................................105
Table 4.4. Field Observations at Denizen.....................................................................109-110
Table 4.5. Field Observations at Metro (and Related Entities)......................................111
Table 4.6. Final Data Set...............................................................................................113
Table 5.1. Summary of Recent Changes in ELA Instructional Materials at Denizen........132
Table 5.2. Summary of Recent changes in Mathematics Instructional Materials at Denizen.135
Table 5.3. Summary of Recent Changes in Science Instructional Materials at Denizen.....137
Table 5.4. Summary of Recent Changes in Social Studies Instructional Materials at Denizen.139
Table 5.5. Instructional Materials in Metro’s IGI............................................................160
Table 5.6. IGIs at Denizen and Metro at the Close of Data Collection.............................170
Table 6.1. Summary of Alignment within Denizen’s IGI.................................................181
Table 6.2. Summary of Alignment within Metro’s IGI....................................................189
Table 6.3. Network with Greater Alignment..................................................................192
Table 6.4. Provision of Instructional Materials at Denizen .......................................................... 197
Table 6.5. Approach to Scripting in Denizen’s Lesson Plans ...................................................... 198
Table 6.6. Provision of Instructional Materials at Metro .............................................................. 203
Table 6.7. Approach to Scripting in Metro’s Lesson Plans ........................................................ 205
Table 6.8. Power in Denizen’s IGI ................................................................................................. 209
Table 6.9. Power in Metro’s IGI ..................................................................................................... 212
Table 6.10. Educativeness in Denizen’s Instructional Materials .................................................. 216
Table 6.11. Educativeness in Metro’s Instructional Materials ....................................................... 222
Table 6.12. Relative Positions on IGI Dimensions ...................................................................... 226
Table 6.13. IGI Alignment and the Framing of Teachers’ Work .................................................. 231
Table 6.14. Pedagogical Content Knowledge and Intellectual Preparation ................................ 233
Table 6.15. IGI Specificity and the Framing of Teachers’ Work .................................................. 236
Table 6.16. IGI Power and the Framing of Teachers’ Work .......................................................... 238
Table 6.17. IGI Educativeness and the Framing of Teachers’ Work ............................................. 240
Table 7.1. Dominant Logics of Professionalism at Denizen and Metro .................................... 312
<table>
<thead>
<tr>
<th>Figure</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 3.1</td>
<td>The Distinction between Authority and Autonomy</td>
<td>64</td>
</tr>
<tr>
<td>Figure 3.2</td>
<td>Relationship among Approaches to Scripting and Specificity</td>
<td>71</td>
</tr>
<tr>
<td>Figure 3.3</td>
<td>Spectrum of Power</td>
<td>74</td>
</tr>
<tr>
<td>Figure 3.4</td>
<td>Prescriptive Versus Discretionary Instructional Guidance</td>
<td>76</td>
</tr>
<tr>
<td>Figure 3.5</td>
<td>Relationships of IGI Dimensions to Professionalism Constructs</td>
<td>80</td>
</tr>
<tr>
<td>Figure 3.6</td>
<td>Model of the Sensemaking Process at Denizen and Metro</td>
<td>86</td>
</tr>
<tr>
<td>Figure 3.7</td>
<td>Conceptual Framework of the Dissertation</td>
<td>91</td>
</tr>
<tr>
<td>Figure 4.1</td>
<td>Timeline of Data Collection</td>
<td>101</td>
</tr>
<tr>
<td>Figure 5.1</td>
<td>Relative Environmental Positions of Metro and Denizen</td>
<td>153</td>
</tr>
<tr>
<td>Figure 6.1</td>
<td>Trends in IGI Alignment at Denizen and Metro</td>
<td>193</td>
</tr>
<tr>
<td>Figure 6.2</td>
<td>Trends in IGI Specificity at Denizen and Metro</td>
<td>207</td>
</tr>
<tr>
<td>Figure 6.3</td>
<td>Accountability and Support across Sectors</td>
<td>213</td>
</tr>
<tr>
<td>Figure 6.4</td>
<td>Trends in IGI Power at Denizen and Metro</td>
<td>213</td>
</tr>
<tr>
<td>Figure 6.5</td>
<td>Intersection of Specificity and Power within Denizen and Metro’s IGIs</td>
<td>214</td>
</tr>
<tr>
<td>Figure 7.1</td>
<td>Typology of Instructional Guidance Infrastructures</td>
<td>311</td>
</tr>
<tr>
<td>Figure 8.1</td>
<td>Summary of Findings: Denizen CMO</td>
<td>316</td>
</tr>
<tr>
<td>Figure 8.2</td>
<td>Summary of Findings: Metropolitan Schools</td>
<td>317</td>
</tr>
<tr>
<td>Figure 8.3</td>
<td>Foundational Role of Conceptions of Teacher Knowledge</td>
<td>322</td>
</tr>
<tr>
<td>Figure 8.4</td>
<td>Associations between Conceptions of Knowledge, Authority, and Autonomy</td>
<td>323</td>
</tr>
<tr>
<td>Figure 8.5</td>
<td>Knowledge-based Typology of Teacher Professionalism</td>
<td>325</td>
</tr>
</tbody>
</table>
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for his steadfast support

To Lucy and Frances,

for the inspiration to finish
CHAPTER ONE: Introduction

Despite efforts to professionalize K-12 teaching stretching from the 1890s to the present day (Kirst & Wirt, 2009), the occupational status of teachers in the United States remains uncertain and deeply contested (Labaree, 2004; Mehta & Teles, 2014). In recent decades, two distinct groups of education reformers, classic professionals and new professionals, have contemporaneously pursued seemingly incompatible teacher policy agendas. Fundamentally different conceptions of teachers’ work drive these divergent agendas. For classic professionals, teaching is complex, intellectual work requiring a significant knowledge base (Crocco & Costigan, 2007; Darling-Hammond & Youns, 2002; Hill, Rowan, & Ball, 2005; Shulman, 1987; Talbert & McLaughlin, 1994). For new professionals, teaching is a craft learned through on-the-job practice, requiring academic aptitude as its only prerequisite (Gray & Whitty, 2010; Zeichner, 2010).

The low status of elementary and secondary public school teachers in the United States (US) has been a concern among many academics, policymakers, and educators for decades (Cohen-Vogel, 2005). Classic professionals seek to elevate the status of teachers to that of doctors and lawyers. Their reform efforts, however, have had limited success (S. Campbell & Haiven, 2011; Mehta & Teles, 2014). Classic professionals have pursued professionalizing policies such as raising standards for admission to teacher training (Ballou & Podgursky, 2000), adding course requirements and extending the length of required fieldwork (Zumwalt, 2016), as well as making more explicit connections between theory and practice throughout teacher preparation (Darling-Hammond, 2010). Raising teacher pay and building career ladders for teachers have been other areas of focus, as well as improving teacher working conditions (Darling-Hammond, 2010; Firestone, 1991; Paine & Schleicher, 2011).
In contrast, new professionals have supported a constellation of interrelated market-based policies aimed at facilitating privatization, including expanding choice in public school systems and deregulating the teacher labor market (Scott & DiMartino, 2009). Changes they have successfully ushered into teacher policy across the country include broadening alternate routes to teaching (e.g., fast-track certification and emergency licensure programs) and strengthening accountability regimes designed to “weed out” ineffective teachers (e.g., the use of value-added measures based on standardized test scores in teacher evaluations). New professionals have also driven the rising use of more prescriptive instructional guidance, extending a trend that began in the 1960s (Porter, 1989). Some of this prescriptive guidance includes curricula with lessons that are explicitly scripted (i.e., containing lines for teachers to read aloud) (Remillard, Harris, & Agodini, 2014). Over the past 30 years, schools across the United States have increasingly adopted such programs (Beatty, 2011; Ede, 2006; Hargreaves & Shirley, 2009; Stone-Johnson, 2014), particularly those in urban areas serving low-income children of color (Beatty, 2011; Carlson, 1987; Darling-Hammond, 2010, 2015; Parks & Bridges-Rhoads, 2012; Stillman & Anderson, 2011; Teale, Paciga, & Hoffman, 2007).

Educational policies, regardless of their ideological origins, can have significant consequences for teachers by shaping the logic of professionalism implicit in the structuring of their work. The logic of professionalism inherent in a teacher’s work emerges from the interacting effects of the level of authority teachers have over their practice, the degree of autonomy they exercise in their classrooms, the way school leaders and the public understand their knowledge and expertise, and the service ethic (or altruism) that governs their work. In addition to shaping teachers’ authority and autonomy, educational policies (and the reform ideologies from which they emerge) invariably reflect fundamental understandings of teacher
expertise. For example, by placing a premium on school choice, new professionalists have furthered the common framing of teacher expertise as contextual—shaped variably by communities’ values and beliefs. In this framing, teacher expertise becomes locally adjudicated, rather than a nationally-relevant practice defined by “overarching professional standards” emerging from a shared body of knowledge (Talbert & McLaughlin, 1994, p. 128). For scholars whose work reflects a classic professionalist understanding of teaching, this is just one example of why they believe that policies pursued by new professionalists tend to be *deprofessionalizing* for teachers (Bernstein, 2000; Darling-Hammond, 2015; Filbert & Shelton, 2015; Gray & Whitty, 2010; Ingersoll, 2003).

Where classic professionalists see deprofessionalization, however, new professionalists see a reimagined professionalism that they believe is better for teachers and for children. The two groups often have quite different perspectives on the same policies. For example, classic professionalists decry how high-stakes accountability systems encroach upon the autonomy of public-school teachers and demoralize them—effects that are deprofessionalizing. In contrast, a new professionalist perspective frames accountability systems as having a net positive effect on the cause of teacher professionalization. Barber (2004) argued that despite some drawbacks, accountability systems strengthen the status of teachers by dispelling the common public perception that unions protect incompetent teachers. In this view, the transparency accorded by accountability systems makes it easier to improve teacher quality and cultivates public trust. Further, the data generated by accountability instruments creates new ‘professional’ knowledge for improving instructional practice. Thus, from this perspective, accountability systems in education are analogous to performance measurement systems in other professions, such as survival rates for surgeries (Barber, 2004).
In the case of high-stakes accountability, the preponderance of empirical evidence supports the classic professionalist stance. For example, the statistical complexity of value-added modeling and widespread reports of its instability (e.g., J. Cohen & Grossman, 2016; Guarino, Reckase, & Wooldridge, 2015) bring the face validity of Barber’s argument into question. Public and practitioner trust may be more readily available for simpler measures of efficacy (e.g., survival rates) than for opaque, controversial algorithms. Further, in the case of high-stakes accountability, the claim of deprofessionalization made by classic professionalists has been supported by numerous empirical studies finding restriction of teacher autonomy and a related decrease in job satisfaction (e.g., Anagnostopoulos, 2003; Day, 2002; Day & Smethem, 2009; J. B. Diamond, 2007; Edgington, 2016; Stone-Johnson, 2014; Valli & Buese, 2007; Wills & Sandholtz, 2009).

The impact of educational policies (other than accountability requirements) on the logic of professionalism in teachers’ work is less clearly documented, particularly in the area of instructional policy. Arguably, educational policies that directly aim to influence classroom practice are likely have the largest impact on teacher professionalism. Schools and districts design and implement policies that shape local instructional guidance infrastructures (IGI). An IGI includes the instructional frameworks, learning standards, curricula, assessments, ongoing professional learning, and mechanisms for instructional oversight (D. K. Cohen, 2011; D. K. Cohen & Bhatt, 2012; D. K. Cohen & Spillane, 1992; Hopkins & Spillane, 2015) intersecting in a particular school or district. The components of an IGI structure the work of teachers by defining what they need to know and be able to do, as well as through influencing their levels of autonomy and authority in the classroom.
Prescriptive Instructional Guidance and Teacher Professionalism

As mentioned above, the rise of new professionalist educational policies has been associated with increased implementation of prescriptive curricula within instructional guidance infrastructures across the country. This trend has an equity motivation at its roots—specifically, concern that students from low-income families do not have opportunities to learn equal to their affluent peers. When this trend began, in the 1960s, school reformers began implementing more prescriptive instructional guidance, primarily in low-income, minoritized communities, in the hopes of “delivering worthwhile content to all students” (Porter, 1989, p. 344). The logic behind these prescriptive programs was that standardization would raise the level of instruction in marginalized communities. The back-to-basics movement of the 1980s and the standard-based reform movement of the 1990s, both motivated by equity as well, deepened the perceived utility of prescriptive instructional programs that seek to standardize and routinize instruction. The standardized testing and high-stakes accountability policies supported by new professionalists in the new millennium have further contributed to expanding reliance on such programs (King & Zucker, 2005; Valli & Buese, 2007).

As with accountability systems, the classic and new professionalist stances toward prescriptive curricula are quite bifurcated. The classic professionalist view held by many academics, policymakers, and practitioners, charges that prescriptive curricula reduce the role of a teacher to that of a “technician” and that the goal of such programs is to “teacher-proof the curriculum” (Porter, 1989, p. 344). For example, Lisa Delpit (2003) named “scripted instructional programs” among a host of “programmed, mechanistic strategies, designed to achieve the programmed, mechanistic goal of raising test scores” that comprise a constellation of education policies characterized by “reductionism…in which teachers and students are treated as
non-thinking objects to be manipulated and ‘managed’” (p. 14). Similarly, John Codd (2005) warned that “in education the culture of professionalism has been largely surrendered to a narrow and reductionist instrumentalism” (p. 194), referring to group of what he termed “neo-liberal” policies in New Zealand, including a highly-specified national curriculum.

In terms of impacts on students, a host of critics echo Delpit (2003) and Codd (2005), arguing that that prescription necessarily narrows the school curriculum and has negative consequences for learning (Milner, 2014; Sawyer, 2004). A considerable body of empirical evidence supports the claim of curriculum narrowing (King & Zucker, 2005; Martin, 2006; Parks & Bridges-Rhoads, 2012; Stillman & Anderson, 2011; Teale et al., 2007), as well as the related claim that prescriptive guidance conceives of school knowledge as a fixed body (Mehta & Fine, 2015). Additional studies have shown that prescriptive curricula tend to be more rote and teacher-centered (Filbert & Shelton, 2015; Parks & Bridges-Rhoads, 2012; Zacher-Pandya, 2012). Prescriptive curricula may lack cultural relevance, leading to lower levels of student engagement (Delpit, 2003; Dutro, 2010; Ede, 2006; Stillman, 2009). Also, scripted curricula may constrain opportunities for differentiation and re-teaching,¹ practices associated with increased student achievement (Bellert, 2015; C. A. Little, McCoach, & Reis, 2014; Timberlake, Thomas, & Barrett, 2017).

Thus, although some advocate for scripted teaching as a means for equalizing opportunities to learn, in practice, the effects of prescriptive instructional guidance may contravene the goal of equity. For example, Tony Bryk (2015) emphasized that “every student is not the same, nor is every context. The complexity is real, and it cannot be side-stepped by

¹ Re-teaching involves using assessment data to identify concepts for which students need additional instructional support and returning to teach those concepts again (in a whole- or small-group format).
standardizing all activity in an effort to ‘teacher-proof’ instructional environments” (p. 474). This classic professionalist orientation toward prescriptive instructional guidance is neither new nor limited to worries about student outcomes. The impact of such guidance on the role of teachers plays a key role as well. In fact, critiques of mechanical instruction have driven professionalization efforts since as early as the 1890s; there has been intentional dovetailing of reforms aimed at more ambitious instruction with professionalization efforts (D. K. Cohen & Mehta, 2017).

With respect to impact on teacher professionalism, classic professionalists argue that prescriptive curricula may strip teachers of authority over their practice and limit their autonomy. Many schools couple the implementation of scripted curricula with strong mandates demanding close adherence to scripts within scrutinizing systems of monitoring that constrain teachers’ exercise of discretion (Au, 2011). Reduced autonomy has been associated with decreased teacher job satisfaction (Pearson & Moomaw, 2005) and increased teacher turnover (Ingersoll, 2001). Enacting scripted curricula may require less intellectual preparation, too, despite their implementation being a response to more challenging academic expectations for students set forth by standards-based reform (Hargreaves & Shirley, 2009). Some have argued that teachers using prescriptive curricula cease to have jurisdiction over the body of knowledge that drives their professional practice; teaching becomes “knowledge-led rather than knower-led” (Gray & Whitty, 2010, p. 12). In this view, curricular knowledge no longer requires commitment and personal dedication on the part of the teacher (Bernstein, 2000). All of these effects would be fundamentally depersonalizing.

There are many reasons, however, to question the classic professionalist stance on prescriptive instructional guidance. First, prescriptive and scripted curricula are not necessarily
more rote and teacher-centered (even though historically the majority have been) (Mehta & Fine, 2015). Rote instruction is actually the norm in American classrooms and is not limited to cities, to charter schools, or to classrooms using scripted curricula (D. K. Cohen & Spillane, 1992; Cuban, 1993; Lortie, 1975; O’Day & Smith, 1993). Further, some scripted curricula model academic work on that of scientists and humanists, which is a tradition of progressive pedagogy (Cohen & Mehta, 2017). For example, the Lucy Calkins Units of Study writing curriculum is a scripted approach to writing workshop, a student-driven model for writing. In the sciences, FOSS kits and Delta science modules provide pre-packaged hands-on, inquiry-based lessons that include complete teacher scripts and all of the necessary materials.

Second, historically, getting reform to penetrate the instructional core of schooling has proven difficult (Cuban, 1993; Elmore, 1996; Tyack & Tobin, 1994). The reforms that have succeeded in altering practice have been those that do not require significant change in teachers’ existing knowledge, skills, and dispositions (Cohen & Mehta, 2017). Prescriptive guidance could potentially enable teachers to implement new instructional techniques without significantly changing their underlying beliefs. It could even go further in shifting classroom instruction if the background information and explicit guidance within a prescriptive curriculum provide teachers with opportunities to learn content and develop stronger instructional practices (Reeves, 2010).

Third, due to an inexperienced teacher workforce (Ingersoll, 2001) and the generally low quality of teacher preparation (Labaree, 2004), many teachers may lack the necessary skills to develop or adapt curriculum on their own (D. L. Ball & Feiman-Nemser, 1988; Spillane, 2004). Scripted curricula may represent a way to accomplish instructional change without investing in building staff capacity.
Fourth, teams of experts in curriculum development may be better positioned to create a high-quality instructional program than any individual teacher. In addition to potentially lacking expertise, teachers may lack the time to design lessons. As education reforms have become more intellectually ambitious (Spillane, 2004) and instituted high-stakes accountability mechanisms, demands on teacher time and skill have increased significantly, intensifying teachers’ work (G. L. Anderson & Cohen, 2015; Apple & Jungck, 1990; Borman, Hewes, Overman, & Brown, 2003; Valli & Buese, 2007). Teacher burnout contributes to widespread attrition from the labor market (Ingersoll, 2001; Skaalvik & Skaalvik, 2010). Shared curriculum can reduce the need for teachers to “invent or adapt” instructional resources “on their own” (D. K. Cohen, 2011, p. 57), especially if it is highly specified. If prescriptive curricula reduce teachers’ workloads, then they may attenuate effects on teacher turnover.

For the above reasons, it is possible that rather than deprofessionalizing the work of teachers, prescriptive instructional guidance may open “new possibilities” for teacher professionalism (Carlgren & Klette, 2008). As such it may present teachers with an opportunity to reconceptualize their work and their occupational identities (Benade, 2012). Scripting may reduce teacher autonomy, but perhaps decoupling the work of instruction and curriculum development can free teachers to focus on other areas of their practice, such as mastering pedagogical techniques or attending to the socioemotional needs of their students. (Many teachers see forging strong affective relationships with their students as essential to learning, and their perceptions of their success in relationship-building is a key factor in their self-efficacy (Beishuizen, Hof, Van Putten, Bouwmeester, & Asscher, 2001; C. M. Corbin, Alamos, Lowenstein, Downer, & Brown, 2019)). Perhaps curriculum development can become a career ladder of distinct professional opportunities for teachers much in the way that coaching and
mentoring roles have become career ladders in some US school districts. These possibilities reflect what Goodson and Hargreaves (2006) called the “double-sided face of educational change,” in which initiatives that some see as deprofessionalizing may paradoxically “sponsor new opportunities for developing teacher professionalism” (p. 126). This dissertation is fundamentally concerned with how the characteristics of an IGI and the conditions of its implementation shape the logic of professionalism that teachers confront in their daily lives.

**Research Questions**

Toward this end, the dissertation investigates two instructional guidance infrastructures, one more prescriptive than the other, in order to examine their implications for teacher professionalism. The (re)structuring of instructional guidance also reconstructs “the meaning of being a teacher, as well as what a teacher is expected to do,” namely the “expected tasks, competencies, and responsibilities” assigned to the role of teachers (Carlgren & Klette, 2008, p. 118). These changes have implications for the exercise of autonomy, the specification of the knowledge base for teaching, and authority over practice. By exploring whether and how the characteristics of an IGI (especially the extent of prescription) convey logics of professionalism and structure the role of teachers, the dissertation contributes to the emerging literatures about instructional guidance infrastructures and the influence of the new professionalism on teachers’ work.

A comparative case study compares the (re)design and implementation of the evolving instructional guidance infrastructures at two school improvement networks in New York City (NYC), Denizen Charter Management Organization (Denizen CMO) and Metropolitan Schools

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2 Advocacy for teacher career ladders is a core part of the professionalization movement; as teachers climb the ladders, each rung elevates their status and salaries (Darling-Hammond, 2015).
Both networks continuously made changes to their IGIs during the period of data collection, even as they were implementing newly developed curricula and teacher professional learning opportunities. Thus, the dissertation also explores the ongoing process of infrastructuring, i.e., “activities that aim to redesign components, relations, and routines of schools and districts that influence what takes place in classrooms,” showing how every design is fundamentally a redesign of what preceded it (Penuel, 2019, p. 1). Thus, designing infrastructure always involves restructuring.

The IGI (re)designs at Metro and Denizen both included the development of new curricula by in-house curriculum writers. I selected Denizen and Metro because these curricula varied in the degree to which they were scripted, in the extent to which the networks mandated their adoption, and in the extent to which networks supported their adaptation and supplementation. Through analysis of this variation, this study aimed to answer the following research questions:

1. What were the characteristics of the IGIs at Denizen CMO and Metropolitan Schools?
   a. What were the similarities and differences in the design and implementation of each IGI?

2. How did the alignment, specificity, power, and educativeness in the design and implementation of the IGIs frame the work of teachers at each network?

3. How did the design of each IGI and staff sensemaking regarding that design reflect and reinforce conceptions of teacher knowledge, autonomy, and authority?
   a. To what extent did these conceptions align with logics of classic or new professionalism?
b. What did staff sensemaking about the IGIs at Denizen CMO and Metropolitan Schools reveal about how competing logics of teacher professionalism co-exist within educational organizations?

Prior to presenting the conceptual framework and methodology for this study, I review the existing literature on instructional guidance infrastructures and prescriptive curricula. Then, I show how this dissertation extends the literature.

**Instructional Guidance Infrastructures**

According to David Cohen (2011), work for human improvement, such as teaching, draws upon social resources that frame, enable, and sustain work. One of these resources is the so-called “infrastructure of practice” (Cohen, 2011, p. 54). In organizations, infrastructure consists of formal structures designed to shape practice (Stinchcombe, 2001). In education, the infrastructure of practice is contained within an instructional guidance infrastructure that anchors the work of schools (Mehta & Fine, 2015), enabling or constraining “leaders’ and teachers’ efforts to provide, maintain, and improve instruction” (Hopkins & Spillane, 2015, p. 422). For teachers, schools, and school networks, this instructional guidance infrastructure (IGI) includes instructional frameworks, learning standards, curricula, assessments, ongoing professional learning, and mechanisms for instructional oversight (Cohen, 2011; Cohen & Bhatt, 2012; Cohen & Spillane, 1992; Hopkins & Spillane, 2015). Instructional guidance infrastructures may also include links designed to connect and align their elements (Cohen & Bhatt, 2012). More broadly, it encompasses preservice education for teachers, new teacher induction, and standards for professional practice that form the basis for assessments of instructional quality (Cohen, 2011; Mehta & Fine, 2015).
Scholars have theorized that a robust IGI can provide teachers with a common foundation for practice that enables more ambitious instruction, and some empirical work has provided preliminary evidence that this is the case (D. K. Cohen, 2011; D. K. Cohen & Moffitt, 2009; D. K. Cohen, Peurach, Glazer, Gates, & Goldin, 2013; Hopkins & Spillane, 2015; Spillane, Parise, & Sherer, 2011). For example, a shared curriculum offers teachers a common framework for developing instructional tasks and common criteria for evaluating student work (D. K. Cohen, 2011). Since teachers are grappling with the same content and instructional plans, a shared curriculum can also foster other types of collaboration (Hopkins, Spillane, Jakopovic, & Heaton, 2013), such as the exchange of subject area knowledge or dialogue around responding to student misconceptions. When shared curriculum is aligned with a cohesive program of professional learning, an IGI can improve not only the quantity but also the quality of teachers’ interactions (Shirrell, Hopkins, & Spillane, 2019). For example, when infrastructure designers (be they networks, districts or schools) develop protocols for teacher collaboration, such as routines for shared data analysis, teacher interactions can become more purposeful and thus, more impactful (Datnow, Park, & Kennedy-Lewis, 2013). This illustrates how the “mere existence of infrastructure” is not a sufficient condition for high quality instruction; educational excellence also depends on “how well the infrastructure is designed and used” (Cohen & Bhatt, 2012, p. 119).

Infrastructure also has the potential to tackle the thorny problem of policy implementation fidelity in education. As mentioned earlier, American schools have been notoriously resistant to change through wave after wave of policy reform (G. L. Anderson &
Herr, 1999; Cuban, 1990; Weick, 1976). The technical core\(^3\) of teaching has proven very difficult
to change (Cuban, 1993; Elmore, 1996; Tyack & Tobin, 1994). In part, scholars attribute this to
the loosely coupled structure of educational systems—in which managerial systems (i.e.,
administration) are decoupled from production systems (i.e., classroom instruction) (Weick,
1976). Loose coupling between levels of organizational hierarchy (such as that between
classrooms, school administrations, and district offices) provides multiple opportunities for
distortion and various forms of non-compliance (Beatty, 2011; Coburn, 2004; D. K. Cohen,
Moffitt, & Golden, 2007; Hallett, 2010; Weick, 1976). Thus, loose coupling contributes to the
typically poor implementation fidelity of instructional policies, i.e., misalignment between
intended versus enacted instructional practices (Firestone & Wilson, 1985; Spillane et al., 2011).

Cohen and Mehta (2017) described this phenomenon in terms of a gap between the
education policy *exostructure* (i.e., state assessments, learning standards, and accountability
policies) and schools’ *endostructure* of “teaching, learning, and the organization of instruction”
(p. 669). Instruments and materials (e.g., curricula, teacher education, teacher professional
learning, school governance, etc.) within an IGI form a layer of critical resources (Mehta & Fine,
2015) that can potentially connect exostructure with endostructure.

Despite its potential benefits, teaching has historically had weak infrastructure in the
This is likely related to the decentralized, federalized nature of the US K-12 educational system
and the variation across its teacher preparation programs (Labaree, 2004). Weak federal control
and moderate degrees of state control combined with a deep tradition of strong local control have

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\(^3\) I follow Elmore (1996) in conceptualizing the technical core as including “how teachers understand the nature of
knowledge and the student’s role in learning, and how these ideas about knowledge and learning are manifested in
teaching and classroom work” as well as the “structural arrangements of schools” that shape classroom practices (p. 2).
resulted in a fragmented system smattered with a patchwork of policies and practices (D. K. Cohen & Moffitt, 2009; Sykes, O’Day, & Ford, 2009). Efforts to influence instruction have been “inconsistent and diffuse” in the US (D. K. Cohen & Spillane, 1992, p. 22). Thus, across American communities there are “many different and frequently divergent conceptions of quality instruction” (D. K. Cohen, 2011, p. 58) and little common specification of the content and sequence of learning the academic disciplines (although in recent years, the Common Core State Standards and the Next Generation Science Standards have begun to change this). Requirements for teacher education and licensure are also a hodgepodge relative to other developed nations (D. K. Cohen & Spillane, 1992). With the notable exception of the National Board of Professional Teaching Standards and its certification process, very little effort has been made (outside of small professional associations of subject area teachers) to specify standards for quality teaching practice that apply to the entire nation (D. K. Cohen, 2011).

In the absence of coherent infrastructure, districts have been left to fend for themselves as they manage the increased demands of new education policies (Fuhrman, Goertz, & Weinbaum, 2007). Teachers, too, have fended for themselves. Absent strong instructional guidance, “teachers’ habits and decisions” become even more important: “Teachers’ work is guided more by inherited practices and individual decisions than by any clear and common view of what is to be covered, how it is to be covered, and why” (D. K. Cohen & Spillane, 1992, p. 23). This has placed a burden on teachers who wish to pursue ambitious instruction (D. K. Cohen, 2011).

More robust IGIs may be one way to ease this burden.

**Previous Research**

Previous research on IGIs has focused almost exclusively on comprehensive school reform designs (CSRs). CSR designs contain IGIs that aim to cultivate more effective classroom
instruction (Berends, Bodilly, & Kirby, 2002) by focusing on “reorganizing and revitalizing entire schools rather than on implementing a number of specialized, and potentially uncoordinated, school initiatives” (Borman et al., 2003, p. 126). These models for whole school change typically have included: common curricula, teacher professional learning, assessments, designs for leadership and school organization, and opt-out provisions for teachers who disagreed (D. K. Cohen, 2011). The CSRs also included provisions for leaders to schedule formal, regular opportunities for collaboration among teachers and the use of robust implementation monitoring systems (D. K. Cohen, 2011).

Starting in the early 1990s, the New American Schools Development Corporation (NAS), a private non-profit organization dedicated to supporting systemic school reform, began supporting the development of CSRs (each of which included an IGI) designed by private sector third party agencies that Peurach & Neumerski (2015) call “lead turnaround partners.” (Berends et al., 2002; Kearns & Anderson, 1996; Rowan, Correnti, Miller, & Camburn, 2009). Financial support went to designs that NAS perceived to have potential to transform large numbers of schools. The federal Comprehensive School Reform Demonstration (CSRD) grant program began funding CSRs starting in 1997 (Desimone, 2002).

Previous scholarship has characterized the expansion of CSRs as a response to standards-based reform (SBR). The effective schools research of the 1970s and the SBR movement of the 1980s brought perennial (and as-of-yet unresolved) questions concerning what counts as worthwhile content and good teaching to the forefront of policy discourse (Porter, 1989). The CSRs, with their explicit focus on changing instruction through a suite of aligned supports, were a response to the historic difficulty of changing practice (Desimone, 2002).
In large part, research on IGIs has focused on CSRs. This is likely because lead turnaround partners funded by NAS and CSRD have been among the only system actors with sufficient capacity to build comprehensive educational infrastructure (Peurach & Neumerski, 2015). Some charter management organizations (CMOs) have had some success with building infrastructure (Duff, Flack, Lyle, Massell, & Wohlstetter, 2019; Duff, Lyle, Flack, Massell, & Wohlstetter, 2018; Lyle, 2019), but historically, the demands of the undertaking,⁴ which Peurach & Neumerski (2015) estimate as a process requiring at least seven years of sustained effort, have exceeded the capacities of educational organizations. Intentional design and construction of a comprehensive instructional guidance infrastructure is a long undertaking that requires deep organizational capacity. Thus, the most prominent examples of this work are from third-party system actors.⁵

Although many⁶ CSRs have been developed over the past three decades, fewer than thirty have been widely implemented (Borman et al., 2003). Some of the most prominent examples include America’s Choice, Success for All, Core Knowledge, the Coalition for Essential Schools, International Baccalaureate, and the Accelerated Schools Program (Correnti & Rowan, 2007; Correnti & Rowan, 2007).

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⁴ By undertaking, I mean the development of a fully-specified IGI that provides comprehensive guidance and aligned supports. Of course, all schools have some kind of educational infrastructure, but these infrastructures can vary considerably in their degree of specificity, alignment, power, and educativeness. This will be discussed in more detail in Chapter Three.

⁵ This dissertation emerged from a larger study of Common Core implementation in New York City. That research team observed this phenomenon. Of 13 intermediate organizations studied, only the CMOs and non-profit affinity partners demonstrated concerted efforts to build comprehensive IGIs. Entities belonging to the New York City Department of Education (NYCDOE), namely offices of community school district superintendents (SOs) and borough-based field support centers (FSCs), did not appear to engage in large-scale infrastructure development. In fact, many of them drew elements of their more piecemeal infrastructures from materials developed by an affinity partner that had received a series of large private and federal grants for this purpose. Thus, it is no surprise that the cases chosen for this spinoff investigation were a CMO and an affinity partner.

⁶ The federal CSRD legislation listed 17 separate models, but schools could also receive money to create their own models; in total, over 380 models have been documented (Desimone, 2002).
Many empirical studies of the impact of these programs on school coherence and student performance outcomes have demonstrated how the components of an IGI can synergistically work together and advance the goal of educational improvement (e.g., Hopkins & Spillane, 2015; Borman et al., 2003; Hopkins et al., 2013; Rowan et al., 2009). For example, the implementation of a more robust IGI at a CMO in the Northeast United States was associated with enhanced network coherence (Lyle, 2019). Similarly, some research on CSRs has shown enhanced coherence. For example, “clarity in goals” at Core Knowledge schools spurred teachers “to borrow from each other more freely” because they “knew what their colleagues were teaching” (Datnow et al., 2000, p. 188). In turn, this led to more alignment in instruction across classrooms.

However, many schools have faced implementation challenges when adopting IGIs (Berends et al., 2002; Bodilly, 1996; Desimone, 2002). For example, across CSR designs, a lack of resources has been a common difficulty, as well as lack of time for training (Bodilly, 1996; Bol et al., 1998; Ross, Troutman, et al., 1997; See, Gorard, & Siddiqui, 2017; Smith et al., 1997). Long-term sustainability is questionable, with levels of implementation in districts and schools tending to decline a couple of years after the initial launch, often due to competing conditions in local policy environments (Datnow, 2005). A comprehensive review of this literature is outside the scope of this dissertation, but a brief exploration of it demonstrates that there is wide variation in the IGIs of CSRs, and this spectrum in design contributes to their differential effects.
**Discretionary IGI designs.** The IGIs within some CSRs were relatively thin and flexible in that they prescribed a broad framework for school processes and student learning but permitted local decision-makers to customize instructional guidance within that framework at their discretion. For example, the Coalition of Essential Schools model was essentially reform philosophy (Sizer, 1992). Similarly, the Comer School Development Program (SDP) specified a non-standardized process for “helping a school examine how to align its own development with the development of children” using a whole-child paradigm (Darling-Hammond, Cook-Harvey, Flook, Gardner, & Melnick, 2018, p. 39). Two other prominent examples of CSRs of this type are Core Knowledge and the Accelerated Schools Project.

**Core Knowledge.** The Core Knowledge CSR (Core Knowledge Foundation, 1998) has been used throughout the United States for the last 30 years, and it is now in use in England (See et al., 2017). The Core Knowledge Foundation developed this CSR motivated by the premise that children from marginalized populations who are navigating poverty “do not read well partly because they do not possess the necessary background knowledge to make sense of what they read” (See et al., 2017, p. 372). Designed to expose children to more non-fiction, build their vocabulary, and increase their background knowledge (See et al., 2017), Core Knowledge specified a “planned progression of topics to teach in language arts, history, geography, math, science, and the fine arts in the elementary grades” (Datnow et al., 2000, p. 167). The Core Knowledge Foundation intended for this list of topics, developed in consultation with experts in multiculturalism, educators, scholars, and scientists (Datnow et al., 2000), to guarantee “equal access for all to the knowledge necessary for higher literacy and literacy” (Datnow et al., 2000, p. 9). This is another example of the equity motivation (mentioned earlier) that undergirds much of the development of instructional guidance.
Although the federal CSRD program funded Core Knowledge, it differed from many other CSRs at its inception in that did not specify materials, books, lesson plans, or pedagogical strategies (Datnow et al., 2000; Datnow, 2005). Early in its implementation, teachers reported spending considerable time lesson planning due to “limited support structures” (Datnow et al., 2000, p. 187). Since then, Core Knowledge has published packaged curricula with spiraled lesson plans aligned to its progression of content. Also, at first, the Core Knowledge foundation did not offer aligned professional learning, though this has since been added (Datnow et al., 2000).

Empirical studies of Core Knowledge have elicited mixed results (Datnow et al., 2000). Case studies in Texas and Maryland showed that Core Knowledge schools had improved reading performance relative to similar schools in their districts (Schubnell, 1996; Stringfield & McHugh, 1998). Other studies showed null results on standardized test scores (See et al., 2017) and no significant impact on grade retention and grade failure (Whitehurst-Hall, 1999). In response to critics of Core Knowledge who suggested that it stifled creativity and higher-order thinking, Baer (2003) did not find negative impacts on students’ creative writing. In a similar vein, Datnow and colleagues’ (2000) study of four Core Knowledge schools found that implementation was associated with “more hands-on, activity-based instruction” (p. 183).

**Accelerated Schools Project.** Developed by Henry Levin (Borman et al., 2003), the IGI of the Accelerated Schools Project (ASP) is another example of a relatively discretionary IGI. ASP posits an abstract, constructivist instructional vision that Correnti and Rowan (2007) described as “authentic, learner-centered, [and] interactive” (p. 303). Instead of offering explicit guidance, ASP works with schools to help them develop their own plans for achieving accelerated learning—an approach that Correnti and Rowan (2007) have called cultural control.
Teachers in ASP schools experienced high levels of autonomy (Rowan et al., 2009). The flexibility of the design and the capacity required at the school may explain why empirical studies of its impact have found very little effect on classroom instruction (Rowan et al., 2009) and only a small positive effect \( (d = 0.09) \) on achievement (Borman et al., 2003). At least one researcher suggested that the lack of aligned assessment tools and strategies to support local staff blocked schools from realizing the ASP vision (Meister, 1991).

**Prescriptive IGI Designs.** In contrast, CSRs with more prescriptive instructional guidance and a wider array of instruments have had a more discernable effect on teachers’ instructional practices (Bol et al., 1998; Correnti & Rowan, 2007). This has been attributed to the more robust spread of supports (e.g., on-site facilitators and local implementation leaders) and accountability mechanisms built into their IGIs to improve the likelihood of fidelity to the design (Correnti & Rowan, 2007). Prominent examples of more prescriptive CSRs include Success for All (SFA), Direct Instruction (DI), and America’s Choice (AC).

**Success for All.** Created by the Success for All Foundation in 1987, SFA was one of nation’s first CSRs. At its core is a highly-specified, skills-based K-6 reading and writing curriculum (Datnow, 2005; Slavin & Madden, 2001). The program provides teachers with a weekly sequence of scripted plans for fast-paced lessons using a direct instruction model (Correnti & Rowan, 2007). These lesson scripts are accompanied by “program-provided curricular materials” for use in the classroom (Correnti & Rowan, 2007, p. 306). Unlike the less structured models described above (i.e., Coalition of Essential Schools, Core Knowledge, and the Accelerated Schools Project), SFA provided very “detailed guidance and required little or no local development” (Desimone, 2002, p. 441). For example, the SFA model specified
mechanisms for monitoring implementation fidelity (Correnti & Rowan, 2007). The design also included aligned tutoring programs and family support teams (Datnow, 2005).

The Success for All Foundation explicitly designed the program for schools with “more than 40% of students receiving free or reduced-price lunch” (Peurach & Neumerski, 2015, p. 389), illustrating again the equity motivation of prescriptive instructional guidance and its prevalence in schools serving children navigating poverty. SFA is still widely used today; more than 1,000 schools have adopted it (Peurach & Neumerski, 2015). It continues to receive substantial federal funding (e.g., the federal Investing in Innovation (i3) program gave the SFA Foundation a $50 million dollar grant in 2010) (Peurach & Neumerski, 2015). Notably, adoption of SFA requires a supermajority vote of 80% of school faculty—a mechanism designed to ensure some level of buy-in to support program uptake (Slavin & Madden, 2001).

Empirical evidence about the efficacy of SFA (as measured by standardized tests) is mixed, but stronger overall than the evidence for the efficacy of Core Knowledge, the Accelerated Schools Project, or the Coalition of Essential Schools (Borman et al., 2003). Multiple evaluation studies have shown positive impacts on reading assessment scores (e.g., Cheung & Slavin, 2016; Slavin, Madden, Karweit, Livermon, & Dolan, 1992), as have some peer-reviewed articles of studies conducted by the program designers (e.g., Madden, Slavin, Karweit, Dolan, & Wasik, 1993) and a peer-reviewed meta-analysis of CSRs (Borman et al., 2003). However, several studies show that positive impacts may be isolated to the earliest grades (e.g., E. M. Jones, Gottfredson, & Gottfredson, 1997; Korelich, Jones, Challoo, Bradley, & Davis, 2016; Ross, Smith, & Casey, 1997). There has been speculation that this trend reflects the declining importance of word decoding (which is a primary emphasis in the SFA curriculum) as
children advance into older grades in which content learning becomes more important for reading comprehension (Rowan et al., 2009).

**Direct Instruction.** Like SFA, Direct Instruction (DI) provides participating school with a highly-specified IGI that includes scripted lesson plans for language arts, reading, and math (Borman et al., 2003). Despite the scripting and the direct instructional model, the program includes strategies associated with so-called progressive teaching: differentiated small group instruction and flexible grouping. A meta-analysis of 48 studies on the efficacy of DI suggested strong positive impacts (Borman et al., 2003).

**America’s Choice.** The America’s Choice (AC) CSR also offers teachers a great deal of instructional guidance. For example, in writing, its detailed curriculum guide was aligned with professional learning opportunities that versed teachers in research-based instructional routines for leading Writing Workshop (Correnti & Rowan, 2007; Rowan et al., 2009). The program also included aligned assessments and local support from AC-appointed facilitators and coaches. Evaluations of America’s Choice have shown a strong influence on local practices, including on leader and facilitator practices, choices in resource procurement, and instructional techniques (Bodilly, 1996; Peurach & Neumerski, 2015). Similar to SFA and DI, the program met the strongest threshold for evidence of positive impact in Borman and colleagues’ (2003) meta-analysis of studies of CSR performance.

**IGIs and Teachers’ Work**

As the brief review of the CSR literature above demonstrates, the majority of studies on formalized IGIs are program evaluations that focus on implementation fidelity and impacts on student achievement. When studies of instructional guidance infrastructures (both CSRs and others) focus on teachers, the emphasis is often on whether teachers change their practice and
how (e.g., Hopkins et al., 2013) or on how such changes influence teachers’ satisfaction with their working conditions (e.g., Ross, Troutman, et al., 1997).

This literature reflects a persistent tension between some reformers’ desire for nonprescriptive, philosophically-driven IGI designs and many teachers’ demonstrated need (and sometimes explicit requests) for more concrete guidance (Desimone, 2002; Heady & Kilgore, 1996; Ross, Troutman, et al., 1997). Some studies have documented teachers’ dissatisfaction with the level of constraint they experienced as the result of CSR implementation (Ross, Troutman, et al., 1997) or the burden of additional work associated with the CSR (Cooper, Slavin, & Madden, 1998). These findings align with the widespread perception that excellent teachers require autonomy and creativity in order to thrive (Desimone, 2002; Porter, 1989). However, as mentioned above, many studies have documented how teachers (when faced with the task of policy implementation) often request more specific, practical instructional guidance (see also Bodilly, 1996; Bol et al., 1998) and professional learning experiences grounded in their school’s curriculum and context from leaders (Cooper et al., 1998). For example, a recent study of teachers implementing Core Knowledge (in its more specified contemporary form) showed that teachers wanted better resources for lesson differentiation and more appealing texts for their students (See et al., 2017). Although these studies grapple with issues of autonomy, authority, and teacher knowledge, they do not synthesize changes in these areas in order to draw conclusions about the logic(s) of teacher professionalism inherent in CSRs.

In addition to reviewing literature discussed above, I also looked more broadly at literature about instructional guidance outside of the CSR context. As shown by the earlier summary of the literature on fragmentation and loose coupling in the U.S. educational system, not all IGIs are formalized within whole school models of reform. (The large amount of tax
money poured into the CSRD and the ability to use a CSR as a discrete unit of analysis likely explain why so much of the literature on IGIs concerns them.) Although not all IGIs are prescriptive (as shown by my earlier overview of CSRs designed as flexible frameworks), I reviewed the literature with close attention to studies of prescriptive instructional guidance.\(^8\) Since prescribing content and instructional practices directly influences autonomy, authority, and teacher knowledge, there are clear implications for the degree and type of professionalization in the teacher’s role. However, trends in authors’ emphases within this body of literature mirrored those in the CSR literature.

Of existing research on prescriptive instructional guidance (including scripted curricula), almost all appears to focus on implications for equity (through opportunities to learn) and/or the impact on student performance (e.g., Datnow et al., 2000; Ede, 2006; Martin, 2006; Remillard et al., 2014; Rowan et al., 2009; Timberlake et al., 2017; Zacher-Pandya, 2012). Only a handful of studies address the impact of such guidance on the teachers who confront it. Of these, most focus on how teachers exercise their agency in determining how to respond to prescriptive guidance (through compliance, accommodation, negotiation, resistance, etc.) (e.g., Achinstein & Ogawa, 2006; Ainsworth, Ortlieb, Cheek, Pate, & Fetters, 2012; Beatty, 2011; Eisenbach, 2012; Filbert & Shelton, 2015; MacGillivray, Ardell, Curwen, & Palma, 2004; Rubin, Patrick, & Goldring, 2017; Smagorinsky, Lakly, & Johnson, 2002; Stillman, 2009; Stillman & Anderson, 2011; Wyatt, 2014). Other studies focus on how prescriptive guidance shapes teacher practice more broadly (e.g., Parks & Bridges-Rhoads, 2012; Valencia, Place, Martin, & Grossman, 2006).

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\(^8\) In contrast to CSR studies and this dissertation, however, the majority of these did not contextualize investigation of a particular prescriptive curriculum within its infrastructure.
Contribution to the Literature

Fewer scholars have looked at how prescriptive instructional guidance shapes the logic of professionalism implicit in the structuring of teachers’ work and how teachers experience their roles. Despite decades of ideological struggle, policy changes, and economic shifts that have been reorganizing of teachers’ work, there appears to be relatively little empirical work on this topic (Shaw, 1990).

Of those scholars who do explicitly focus on professionalism, some proffer case studies of the working experience of fewer than five individual teachers implementing prescriptive curriculum of some kind (e.g., Kang, 2016; Meyer, 2002). While case studies of this kind have intrinsic value, they offer a different type of scholarly contribution than my own study, which focuses on the actions of network-level personnel rather than individual teachers. Similarly, much of the work of other researchers who use larger samples differs from my own. Some focus on only one aspect of working conditions related to professionalism, such as autonomy (Datnow et al., 2000; Hopkins & Woulfin, 2015; Mehta & Fine, 2015), authority over practice in the context of high-stakes accountability systems (e.g., Anagnostopoulos, 2003; J. B. Diamond, 2007; Valli & Buese, 2007), or the exercise of discretion (e.g., Sawyer, 2004). Others focus on teacher outcomes related to professional identity, such as satisfaction and attrition (Costigan, 2005; Crocco & Costigan, 2007; Sinclair, Ironside, & Seifert, 1996).

Of all the literature I found, Hargreaves (2000) alone addressed the link between prescriptive instructional guidance and the new professionalism, but this piece was an essay, not an empirical study. Thus, after reviewing the literature, I believe this dissertation is among the

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9 This is a labor market phenomenon linked to new professionalist reform efforts in education. I describe it in detail in Chapter Two.
first empirical studies to examine the phenomenon of prescriptive instructional guidance infrastructures using a comprehensive conceptual framework drawn from the sociology of professions. I also integrate frameworks of teacher knowledge from the education policy literature into my sociological approach. Although there are existing studies that connect curriculum to conceptions of teachers’ knowledge (e.g., Charalambous & Hill, 2012), there are very few that link this relationship with professionalism, and these mention knowledge only briefly (e.g., Klette, 2002).

Another contribution of my study is to highlight the process of IGI development within networks for school improvement. Most of the literature currently describes CSRs designed by third-party companies and implemented by school districts. To the best of my knowledge, this study offers the most detailed account to date of home-grown IGIs; the dissertation describes their development and evolution, the driving rationale, decision-making processes, the types of labor involved, and more. Although the United States educational system has been dominated by commercially-produced curricula for at least fifty years (Goodlad, 1984), there is a very large number of unstudied IGIs designed \textit{in situ} by schools and networks across the country (Desimone, 2002). It is important to empirically describe previously under-documented phenomena in schooling. In the case of this phenomenon, descriptive and exploratory studies are a necessary first step to explanatory or evaluative work that generates knowledge about the relative merit of approaches to IGI design and informs the design of policies.

\textbf{Chapter One Conclusion}

Almost thirty years ago, Joan Talbert and Milbrey McLaughlin (1994) observed how within individual schools, the decisions of “administrators and staff can enable or constrain teacher professionalism in ways such as providing more or less space and time for collegial
interaction, signaling and authorizing more or less teacher responsibility for good professional practice, establishing more or less meaningful opportunities for teachers to continue learning” (p. 146). This dissertation applies that insight to school networks and their instructional guidance infrastructures. As Talbert and McLaughlin observed about school districts, conditions such as “committee structures, professional development opportunities, and governance play a prominent role in framing teachers’ work lives” (2007, p. 129). The characteristics of networks and their IGIs function in much the same way.

While Talbert and McLaughlin conceived of teacher professionalism in a vein similar to the classic sociological fashion (outlined in the next chapter), this dissertation adds needed complexity by exploring the implications of IGIs (and the accompanying administrative actions) designed in the context of new professionalist educational reform for teachers. Relatively little is known about how teachers experience their role in the context of the new professionalism (Torres & Weiner, 2018) or about how relatively new forms of schooling organizations (e.g., CMOs and affinity partners) are restructuring the nature of professionalism in teachers’ work. By comparing IGIs with differing levels of prescription across two educational sectors, this dissertation reveals how patterns in conceptions about teachers’ knowledge, authority, and autonomy intersect and compete to construct teaching in particular ways. My work explores how IGIs can shape the nature of teachers’ role and thus, the degree and type of professionalism implicit in the structuring of their work.

As I outlined earlier, the trend toward more prescriptive instructional guidance associated with new professionalism only appears to be increasing. In NYC, at least, there is evidence that this is a response to standards-based reform raising expectations for teachers and students without providing additional resources to support systemic change (Duff et al., 2019; Duff et al.,
The production of prescriptive and scripted curricula necessarily decouples instruction from curricular development, and it is important to understand implications of this trend for teachers. The questions of whether scripted materials can be educative for teachers, improve their working conditions, or professionalize the role of instructor and create new professional pathways in curriculum development are open ones. The findings of this dissertation could potentially contravene the conventional wisdom on scripted curriculum among classic professionals and counter the charge that new professionals seek to deprofessionalize teachers’ work.

**Organization of the Dissertation**

In the next chapter, I synthesize the sociological literature on conceptions of teacher professionalism and discuss its relevance to the working lives of teachers. Chapter Three describes the operationalization of the theoretical constructs emerging from Chapter Two in the contexts of classic and new professionalism; it also explains my conceptual and operational approach to understanding instructional guidance infrastructures during data collection and analysis, as well my approach to sensemaking in qualitative data analysis. Chapter Four lays out the study methodology, describing the research design, sources of data, and providing more detail about analytic techniques.

Chapter Five is dedicated to findings emerging from investigation of the first research question. It describes the elements of IGIs at Metro and Denizens, compares and contrasts their characteristics, and briefly discusses similarities in the networks’ rationale for developing them. Chapter Six presents findings related to the second research question, showing how the elements of each network’s IGI fell along the dimensions of alignment, specificity, power, and educativeness, and how these positions framed the work of teaching. In Chapter Seven, I address
the third research question and explore how staff sensemaking at the networks reflected conceptions of teacher professionalism and show how competing logics of professionalism co-existed within each network. Chapter Eight includes a discussion and conclusion. It synthesizes findings across the research questions and builds theory relating to the teacher knowledge and forms of professionalism. Then, I offer a reflection on the frameworks for the dimensions of variation in IGIs and the forms of teacher knowledge, suggest areas for future research, and conclude with a summary of findings and the significance of the work.
CHAPTER TWO: Contemporary Shifts in Professionalism

Shifts in the labor market are the consequence of social and economic change (Carlgren & Klette, 2008). Contested understandings of professional work and shifts in the nature of that work are no exception. In order to understand the shifting nature of teachers’ work, I employ a sociological framework that outlines two predominant conceptions of professionalism in the United States over the past 50 years: classic and new professionalism. Classic professional work experienced a “golden age” in the 1950s and 1960s\(^\text{10}\) due to strong professional associations that enjoyed considerable control over their work and the “high level of legitimacy accorded to expert knowledge obtained from a university-based formal education” (Gorman & Sandefur, 2011, p. 277). Carr-Saunders and Wilson (1964) and the many sociologists influenced by their work (e.g., Elliott, 1972; Stichweh, 1997) considered these golden-age professions to be stabilizing influences in society. During this golden age, professional work was associated with monetary and psychic rewards (Mehta, 2013) derived in part from having higher income and status than the majority of other occupations (Gorman & Sandefur, 2011). Then, with the globalizing economy in the 1970s and 1980s, a “new” professionalism began to emerge (Evetts, 2009). Below, I outline theories of classic, semi-, and new professionalism, and I situate teachers in this landscape. I also use empirical literature to summarize how broader shifts in the nature of professional work across industrialized economies have manifested in the working lives of teachers. Information about the operationalization of these ideas can be found in Chapter Three.

\(^{10}\) For this reason, Helgøy and Homme (2007) refer to it as “old” professionalism.
Classic Professionalism

The classic sociological\textsuperscript{11} definition holds that professional work is characterized by individual and collective autonomy (Beck & Young, 2005; Gorman & Sandefur, 2011; Larson, 1977). Professional work is discretionary in nature (Freidson, 1999; Frowe, 2005; Gorman & Sandefur, 2011), incorporates an element of altruism or service (Benade, 2012; Elliott, 1972; Gorman & Sandefur, 2011; Larson, 1977; Muzio, Brock, & Suddaby, 2013; Parsons, 1968; Tawney, 1920; Wermke & Höstfält, 2014), and rests upon an abstract knowledge base (Abbott, 2014; Beck & Young, 2005; Freidson, 1999; Mehta & Teles, 2014) of specialized knowledge (Boreham, 1983; Gorman & Sandefur, 2011) acquired through long-term formal education (Helgøy & Homme, 2007; Wilensky, 1964). This knowledge enables the cultivation of situated expertise in practice.

This educational training must give “prominence to an intellectual component” of a “generalized cultural tradition,” giving “primacy to the valuation of cognitive rationality as applied to a particular field” (Parsons, 1968, p. 536). The shared knowledge base generated through this tradition undergird shared standards of practice that guide the discretionary work of professionals. Thus, students hoping to enter a classic profession must engage with the theoretical and scientific underpinnings of practice, not merely learn to execute practice. In practice, the “activities of professionals… are characterized by an important margin of indetermination” (Boreham, 1983, p. 699). The professional relies on the knowledge base acquired through formal education (and the shared standards of practice emerging from that knowledge base) when confronting uncertainty. In practice, they apply abstract knowledge in a

\textsuperscript{11} Since my research is situated in the United States, I primarily draw upon literature reflecting Anglo-American conceptions of professionalism; there is a distinct Continental mode of professionalism first described by Randall Collins (Evetts, 2011).
political and institutional context with discretion, developing and exercising a distinct type of situated expertise (i.e., skilled practice). In contrast, routine work does not require discretion, and in many cases, managers actively discourage the use of discretion (Freidson, 1999). Craft work, such as carpentry, involves discretion, but practice with a concrete rather than theoretical knowledge base (Freidson, 1999; Stichweh, 1997).

Classic professions govern themselves (Dent & Whitehead, 2013; Faulconbridge & Muzio, 2011; Mehta & Teles, 2014; Portwood & Fielding, 1981). Professionals aim to have authoritative jurisdiction over a particular set of practices, but external actors continuously contest the boundaries of that jurisdiction (Abbott, 1998). In response, professionals use a host of demarcationary strategies to monopolize jurisdiction over their work in order to restrict outsiders from the economic rewards and opportunities conferred by membership (Andrews & Wærenness, 2011; Benoit, 1994; Boreham, 1983; Macdonald, 1995; Weber, 1978). The governing body of professional groups typically controls entry and membership, as well as professional training and the issuing of credentials (Beck & Young, 2005; Boreham, 1983; Muzio, Brock, & Suddaby, 2013). These credentials function as labor market signals that certify possession of requisite abstract knowledge and authoritative jurisdiction over specialized tasks, enhancing authority and legitimacy with the public and clientele (Collins, 2002; Weber, 1978).

Credentials help occupational groups achieve occupational closure. Originating from Weber (1979), occupational closure is a specific instance of social closure (Weeden, 2002). It occurs when members of an occupation “construct and defend social and legal boundaries” that reward their members with benefits like increased wages or elevated status (Weeden, 2002, p.

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12 Because of this characteristic governance by members of the occupation, Evetts (2011) refers to classic professionalism as “occupational” professionalism. In contrast, Evetts refers to new professionalism as “organizational” professionalism.
Professionalization can be thought of as a process of increasing occupational closure in order to monopolize a practice; deprofessionalization can be thought of as a process of losing jurisdiction (Andrews & Waerness, 2011; Collins, 2019; Wilensky, 1964). In other words, professionalization creates scarcity (by controlling the supply of expert labor) and security (for those experts), thereby regulating a field of practice (Larson, 1977).

Occupational closure (and the resulting professionalization) confer autonomy and authority on members within the constructed occupational category. Collective autonomy and authority allow professionals to develop shared standards of practice, codes of ethics, and performance benchmarks for themselves, enforcing them using internal accountability systems (Beck & Young, 2005; Dent & Whitehead, 2002; Wilensky, 1964). These systems of accountability provide legitimated authority to sanction non-compliance and force unsatisfactory members to exit the group (Dent & Whitehead, 2002). The standards of practice, ethics, and performance set by professional groups also contribute to trust between the professional and client, as well as between the professional group and the state (Beck & Young, 2005; Evetts, 2009). Such groups pursue not only economic interests but also social interests, such as increased prestige (Macdonald, 1995; Weber, 1978). The relatively high pay in the classic professions, brokered in part by powerful occupational groups, also contributes to their elevated social status (Macdonald, 1995; Portwood & Fielding, 1981).

Teaching: A Semi-profession

The characteristics outlined above comprise a paradigmatic definition of classic professional work in sociology (Macdonald, 1995). Traditionally, teaching in the United States has borne some (but not all) of these trappings of professionalism (Mehta & Teles, 2014). For example, teaching has some mechanisms of occupational closure, including formal preparation
leading to educational credentials, licensure exams, state certification, and accreditation (Ingersoll, 2003; Darling-Hammond, 2010; Muzio, Brock, & Suddaby, 2013). However, teaching deviates from classic professionalisms in significant ways (Mehta & Teles, 2014). Its labor force is largely unionized (Campbell & Haiven, 2011), which may contribute to the low occupational status of teaching. Many unionized occupations are industrial (Freidson, 1994), which may give unionization a blue-collar gloss. Additionally, many policymakers view union demands for improved teacher working conditions as “as being in competition with student learning in a zero sum resource environment” (Bascia & Rottmann, 2011, p. 788). In the classic professions, self-governing associations function as regulatory agents that shape understandings of occupational jurisdiction, host interaction and debate among members of the professional community, and manage challenges to their authority over a particular domain (Greenwood, Suddaby, & Hinings, 2002). In teaching, however, professional associations are comparatively less powerful. They provide professional learning opportunities for their members, but power to structure the organizational field and shape occupational jurisdiction rests squarely with teacher unions (and of course, the state).13

Unions may not be completely incompatible with professionalization, however. For example, in the early years after the adoption of collective bargaining, teachers’ unions sought control over teacher certification at the state level, arguing that true professions must control entry to their ranks (Kirst & Wirt, 2009). Policymakers largely ignored their “negotiations for professionalization,” however, and if anything, sharpened differences between factions of educators with different priorities (Angus, 2001, p. 32). Since their inception, unions have been

13 This is less true for privately-funded, public charter schools, as the majority of charter school teachers are not unionized (Hart & Sojourner, 2015; Matsudaira & Patterson, 2017).
successful in improving teaching and learning conditions with respect to the physical plant of schools, such as air conditioning; additionally, collective bargaining has had some success in obtaining contracts with class size limits and more pay for advanced degrees (Kirst & Wirt, 2009). Unions have had less success with provisions about discipline, maintenance, and security in schools (Kirst & Wirt, 2009). This reflects a reality typical in unionized industrial occupations: workers control the terms and conditions of work through the union, but the union does not control the actual work that is done (Freidson, 1994). In contrast, established professions control the work itself, even when managers control the terms and conditions of work (Freidson, 1994).

Another key difference between teaching and the classic or full professions is the length of formal training. As mentioned above, the classic professions share “common and lengthy systems of education and vocational training” (Evetts, 2009, p. 248). In contrast, public school teachers must receive formal training, but it is relatively short (Cohen & Mehta, 2017; Etzioni, 1969; Lortie, 1975). Also, fast-track alternate routes to certification (e.g., Teach for America) and emergency licensure supported by new professionalists provide clear pathways for bypassing mechanisms of occupational closure (Cohen & Mehta, 2017), and the proportion of teachers choosing these pathways is growing (Redding & Smith, 2016).

There is some degree of an abstract knowledge base for teaching, but little consensus on its contents and disagreement about its necessity. A classic professionalist understanding of this knowledge base holds that it is “a codified or codifiable aggregation of knowledge, skill, understanding, and technology” (Shulman, 1987, p. 4). This sets teaching apart from the classic

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14 Additionally, despite opposition to homeschooling and efforts to place parent-teachers under contract or require their certification, unions have largely failed to gain jurisdiction over homeschooling (Levy, 2009).
professions. Although there are disputes about standards of care in certain areas of medicine, for example, there is still a strong shared technical culture, much of which is codified in diagnostic manuals and other institutionalized repositories of guidelines for medical practice (e.g., the database LactMed, medical board exams). Similarly, lawyers use shared technical resources (e.g., Westlaw and LexisNexis) to access case law (and the precedents therein) that has accumulated over centuries of practice. In contrast, many scholars have noted a lack of a shared technical culture among teachers (e.g., Lortie, 1975; Rosenholtz, 1989). Additionally, teachers have less control over the content of their work than do professionals in other fields. In democracies, states have legitimate authority to determine, to a considerable degree, what children are taught (Labaree, 1999). This being said, the state has a regulative role in other more established professions. For example, architects must adhere to safety standards promulgated by the state.

Transmitting an abstract knowledge base to preservice teachers has also proven difficult. Teaching is unique in that all teachers complete an apprenticeship of observation (Lortie, 1975) as children prior to entering teacher preparation programs. Despite training in contemporary pedagogical techniques, many teachers revert to emulating the teachers who taught them as children (Labaree, 2004). Additionally, since almost all non-teaching adults undergo this same apprenticeship, the American public largely believes it possesses expertise when it comes to teaching (Lortie, 1975; Labaree, 2004; Talbert & McLaughlin, 1994).

That said, teachers and classic professionals share some attitudes toward practice. Among classic professionals, claims to untestable, tacit knowledge and the exercise of discretion undergird a common belief that each individual practices the occupation in a unique way (Frowe, 2005; Larson, 1977). This is related to another common belief that professional competence
relies in part on innate talent; in this sense, professionalism is individualistic (Frowe, 2005; Larson, 1977). Teaching bears some similarity to this. Public discourse is filled with aphorisms about some people being “born” to teach and teaching as an “art.” Also, there is a strong tradition of individualism in teaching (Lortie, 1975).

In addition to the differences described above, public school teaching is distinguished from the classic professions by its clientele. First, the clients do not pay for services. This structure, combined with the public funding of schooling, keeps teachers’ wages low relative to their educational level, contributing to the low status of the teaching occupation (Lipsky, 2010). Second, the clients are compelled to attend school by the state and their families—children are a captive audience (Ballou & Podgursky, 2000). Finally, education can be a public good (Labaree, 1999; Ranson, 2003). Thus, there is more at stake than the delivery of a service from an individual professional to an individual client (as when an architect designs a home for a wealthy family or a lawyer writes a will for new parents). As a result, accountability relationships are complex: teachers are not only accountable to parents and students but also to their local educational authority and to the state (Ranson, 2003).

For these reasons, as well as the low pay and predominantly female workforce (Witz, 1990), Etzioni (1969), Grimm and Stern (1974) and others have categorized teaching as semi-profession (along with nursing, midwifery, and social work). Others have called them the “caring professions: (Hugman, 1991). It is important to note that the low pay is certainly related to the gender composition of these occupations (Witz, 1990). Further, semi-professionalism status is an artifact of power relations, reflecting a denial of claims to professional status that reflect gendered and racialized power structures (Hugman, 1991).15

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15 I am grateful to Carolyn Riehl for reminding me not to overlook this.
One characteristic of semi-professional work is its position in the lower rungs of a hierarchy without clearly defined ladders for upward mobility (Marshall, 1939). While a variety of structured career ladders have started to emerge for teachers, it is still the case that in most districts, there is only one ladder upwards and that ladder leads out of the classroom (away from teaching practice) into administration. Additionally, some scholars have argued that the semi-professional occupations fail to attain the status of the classic professions because their practitioners rely on generalized “know-how and practical techniques” rather than “esoteric knowledge” suited to navigating uncertainty (Benoit, 1994, p. 313). Empirical studies of midwifery lend support to this claim, showing that midwives refer nonroutine or abnormal births to obstetricians (Benoit, 1994).

As described in Chapter One, for decades, a group of education reformers (whom I call classic professionalists) have pursued a policy agenda aimed at professionalizing teaching. At the same time, others (whom I call new professionalists) have sought increased control over teachers’ work. However, struggle between those who favor de-professionalizing and those seeking to enhance professionalism is not unique to education; it is characteristic of the postmodern or post-professional era (Hargreaves, 2000). There have been analogous struggles in medicine over the past several decades as multinational corporations have gained managerial control in essentially all aspects of the business of medical care (McKinlay & Stoeckle, 1988). For example, the expanding use of electronic medical records has required doctors to submit to bureaucratic authority in new ways (Reich, 2012). In the next section, I describe these trends, and I expand on Chapter One’s brief description of new professionalist policies in education,

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16 This phenomenon reflects larger economic trends, but it also is related to the low status associated with teaching being a female-dominated occupation. Michael Apple (1986), for example, has argued that efforts to teacher-proof the curriculum have gained traction in part because the majority of teachers are women.
contextualizing prescriptive instructional guidance in current labor market trends and discussing potential ramifications of new professionalist policies for teachers’ work.

**The New Professionalism**

Shifts in the structure of markets due to deindustrialization and globalization have revolutionized Western economies over the past several decades, bringing related changes to the structure of occupations. The decline of confidence in social institutions associated with postmodernity (Apple, 1986; Beck & Young, 2005; Dent & Whitehead, 2002; Giddens, 1991) and transitional capitalism (S. Power, 2006) has led to a crisis of legitimation (Lyotard, 1984) in which implicit trust in social institutions and professional expertise has eroded, fueling the rise of technical-rational accountability regimes (Dent & Whitehead, 2002; Stichweh, 1997). In part, this lack of trust may stem from epistemological shifts associated with postmodernity that acknowledge the inherent subjectivity of knowledge claims (Quicke, 2000) as well as the breakdown of informal social networks and voluntary associations (Putnam, 2000). These economic and social shifts have led to a radical transformation of professional work (Freidson, 1994). While an element of altruism has remained consistent (Gorman & Sandefur, 2011), organizational (or bureaucratic) control “from above” has been gradually replacing occupational control “from within” in many sectors of the labor market (Evett, 2009). Standards of occupational practice in the so-called professions have increasingly been developed by non-practitioners located in managerial hierarchies or state bureaucracies. Similarly, non-practitioners have increasingly spearheaded performance evaluation.

Thus, although usage of the word “professional” has been expanding far outside its traditional sphere (Fournier, 1999), classic professionalism has been waning since the end of its golden age in the 1950s and 1960s (Gorman & Sandefur, 2011), and a new professionalism has
been emerging. Three related phenomena characterize the new professionalism: the blending of professional and managerial roles, the routinization of professional labor, and the rise of performative accountability systems. Together, these phenomena contribute to declining practitioner autonomy (Anderson & Cohen, 2015; Ball, 2003; Dent & Whitehead, 2002; Stichweh, 1997).

In contrast, a defining feature of the classic professions was insulation from managerial tasks. In the ideal-typical bureaucracy, there is a clear division of professional and managerial roles (Weber, 1978). However, as the golden age of professionalism waned in post-WWII America, a class of professional managers began to emerge (Hayden, 2015). The theoretical underpinnings of professional work were “increasingly being sucked into administrative machines, where knowledge [was] standardized and routinized into the administrative apparatus and professionals [became] mere managers” (Mills, 2000, p. 112). In contrast to the autonomous professional, a manager “controls and is controlled within a hierarchical, rule-governed, system of accountability” (Dent and Whitehead, 2002, p.11). As the routinization of discretionary work and the expansion of accountability systems continued, the distinction between managerial and professional roles blurred further, contributing to the erosion of classic professionalism and the rise of new professionalism (Broadbent, Dietrich, & Roberts, 2005; Macdonald, 1995).

**The Routinization of Discretionary Work**

Efforts to standardize and routinize the knowledge base of discretionary work are a defining characteristic of the new professionalism. In contrast, a high level of discretion in the face of uncertainty17 was an essential element of the classic professions (Jamous & Peloille, 1970).

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17 Jamous and Peloille (1970) defined the professions as “occupations or activities whose indetermination/technicality ratio, intrinsic to systems of production, is generally high” (p. 113). This ratio divided aspects of practice that “can be mastered and communicated in the form of rules” by those that “escape rules” and “are attributed to the virtualities of producers” (Jamous & Peloille, 1970, p.112).
Over the past forty years, mechanisms for routinizing tasks previously under the jurisdiction of classic professionals have proliferated across sectors. Much of this has been accomplished through automation. In law, for example, the automation of tasks such as document review have routinized tasks that were formerly performed by lawyers (Epstein, 2014). Additionally, in architecture, engineering, and accounting, automation has encroached upon professional tasks (Boreham, 1983).

In a sense, this represents a return to the Taylorism (or scientific management) of the early 20th century (Sinclair et al., 1996). Taylor’s methodology for increasing the efficiency of industrial production and bureaucratic processes had three guiding principles: 1) managerial study of the craft, 2) separating planning of work from its execution, and 3) using knowledge of craft to identify methods of routinization and control the organization and execution of the work (F. W. Taylor, 1911). Since professionals’ “monopolization of competence is generally legitimized by appeals to indeterminateness and to the virtualities of the occupation” (Boreham, 1983, p. 700), methods of rationalization that routinize aspects of practice threaten classic professional legitimacy.

Empirical research across many occupational sectors has explored the implications of this routinization for workers, but normative judgements about its desirability remain mixed. Many scholars have argued that mechanisms for reducing uncertainty in practice, which change the ratio of indeterminateness to technicality in work, are inherently de-professionalizing. For example, Braverman (1998), Jamous and Peloille (1970), and others have argued that routinization causes a fundamental deskilling and degradation of work into “its cheapest and most controllable forms” (Sinclair et al., 1996).
Attewell (1987) and others have contested this deskilling thesis, showing evidence that, at least in clerical occupations, routinization (and the related phenomenon of automation) have opened discretionary spaces for more creative worker tasks. The extent to which this happens likely depends on the nature of the work being routinized and the nature of the work filling the time saved by routinization. If automation saves professionals time spent on rote tasks and if that time is replaced by additional non-routine or creative work, then the proportion of discretionary work may increase and the net effect on the ratio would be positive. As Attewell (1987) argued, however, the most deskillled and repetitious types of labor most easily lend themselves to routinization and automation.

**The Expansion of Accountability Systems**

Paradoxically, hierarchical bureaucracies have increasingly applied discourses of professionalism to many different types of workers at the same time that trust and discretion have eroded (Evetts, 2009). Both classic professionalists and new professionalists have laid claim to the language of professionalism in order to further their policy agendas (Crompton, 1990). For new professionalists, the adjective “professional” has come to denote a set of performed behaviors (e.g., punctuality and manner of dress) that demonstrate commitment to or competence in one’s job, regardless of the kind of work (Fournier, 1999). Expanded accountability systems (another hallmark of the new professionals) aim to assess these behaviors.

These systems integrate the “technology of performativity,” which Stephen Ball (2003) described as “a culture and a mode of regulation that employs judgements, comparisons and displays as means of incentive, control, attrition and change – based on rewards and sanctions (both material and symbolic)” (p. 216). The technology of performativity has changed the conditions for legitimacy for workers in “occupations with a claim to professionalism”
(Svensson, 2006, p. 590), including teaching. Performativity privileges the legitimacy of instrumental and ostensibly objective systems of accountability over the specialized knowledge and discretion of individuals (Beck & Young, 2005; Dent & Whitehead, 2002; Stichweh, 1997). Since the 1980s, workers have been increasingly subject to performance auditing using ostensibly objective measurement tools aligned to externally imposed performance indicators (M. Power, 1997; Ranson, 2003). So-called new professionals earn trust through performances that measure high in quality (defined in terms of efficiency or productivity) (Ball, 2003; Dent & Whitehead, 2002; Evetts, 2009; Lyotard, 1984; M. Power, 1997, Stichweh, 1997).

This trend is associated with the trend toward increased managerialism, particularly in the public sector (Torres & Weiner, 2018). “New managerialism” or New Public Management (NPM) (as it was called in the United Kingdom when it emerged) was characterized by “greater emphasis on output” codified in “explicit standards and measures of performance” applied to public employees (Hood, 1991). Performance ratings became linked to rewards and sanctions (Hood, 1991, p. 4). To support this new managerial paradigm, companies and other organizations, particularly public service providers, have invested heavily in formalizing criteria for scrutinizing workers and developing associated metrics in order to make performance auditable (M. Power, 1997). This shift reflects the state’s increasing application of market-based logics from the private, corporate sector to public sector work—a so-called economic turn in public policy (Singh, 2015). These logics “require the invention of fixed criteria of efficiency and effectiveness, against which ‘progress’ is recursively monitored” (Webb, 1999, p. 762).

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18 These changes are associated with a “shift toward privatization and quasi-privatization” of public services, in conjunction with increase in competition (Hood, 1991, p. 3).

19 A key phenomenon in the modern economy has been the expansion of state employment (Webb, 1999).
This phenomenon is polarizing. Its advocates declare it is necessary for quality assurance and public confidence in an era of declining public trust, but some scholars (Lingard & Sellar, 2013) argue that it generates “perverse unintended consequences” by distorting public services into measurable practices that displace less quantifiable practices of “internal excellence” (Ranson, 2003, p. 460). In this latter view:

Achievement grows out of the internal goods of motivation to improve (that follows recognition and the mutual deliberation of purpose) rather than the external imposition of quantifiable targets, while public trust follows deliberation of common purpose out of difference and discord, rather than forces of competition that only create a hierarchy of class advantage and exclusion (Ranson, 2003, p. 476).

From this perspective, performance improvement in public services requires a process of democratic deliberation and the cultivation of intrinsic motivation. The application of market logics (Pollitt, 1990) and the imposition of a “fabricated instrumental rationality” displaces public participation (Ranson, 2003, p. 476). In this view, public trust requires discourse leading to shared understanding of the purpose of public services and consensus around criteria for assessment of their practice—a democratic accountability (Ranson, 2003).

Further, these scholars argue that the rise of performativity has a negative impact on the services received by the public. For example, Hoggett (1996) claimed that the output measures used to evaluate public service providers invalidated work that was “non-visible and non-measurable,” namely “the care and attention given to service users” (p. 24). Micro-control of the behavior of students and teachers may stand in contrast to the “liberal or humanistic paradigms” of educational progressivism (Jones & Moore, 1993, p. 387).
Teaching in the Era of the New Professionalism

As described in Chapter One, the new professionalism and the related societal trends described above have penetrated the educational system in recent decades. Declining public trust in social institutions has included a decline in confidence in public schools (Hochschild & Scott, 1998; Loveless, 1997; Nunnery, 1998). The growth in accountability regimes, intensive teacher evaluation, and privatization\textsuperscript{20} in school systems reflect a distinctly neoliberal reliance on market logics and inspection associated with the new professionalism (Gordon & Whitty, 1997; Ranson, 2003). An emphasis on evaluating teachers’ performance reflects the performativity of the postmodern era. Efforts to routinize teachers’ work are illustrative of broad attempts to control systems of expertise that have characterized the postmodern condition and contributed to the changing structure of professional work described earlier (Giddens, 1991).

Specifically, new professionalism (and the associated new managerialism) are manifest in educational policies based in the logic of market competition such as closing low-performing schools and opening “start-ups that are often outside of local democratic control (e.g., charter schools)” (Anderson & Cohen, 2015, p. 3). Similarly, the adoption of corporate structures (e.g., COOs) from industry in school networks is consistent with the new professionalism (Apple & Jungck, 1990; Hood, 1991). Corporate management techniques introduced into schools over the past several decades include performance appraisals, value-added measures based on standardized test scores, merit pay, and test score target-setting (Ball, 2003; Firestone, 1994; Mac An Ghaill, 1992). Implementation of these techniques often requires the labor of middle managers.

\textsuperscript{20} I follow Scott and DiMartino’s (2009) definition of privatization: “a range of reforms that redistribute resources and control over most aspects of schooling away from traditional public governance structures to a disparate assemblage of parents, teachers, school leaders, community members, private sector actors, and private organizations” (p. 433).
Managers instituting performance management systems built around these techniques leverage scientific research in order to cultivate legitimacy. For example, New Labour initiatives in the United Kingdom intended to: “draw together and codify the best knowledge from research and practice of school improvement and effectiveness and submit them to the regulatory power of the state” (Ranson, 2013, p. 466). This required “increasingly meticulous specification of the ‘inputs,’ processes and outputs” expected of schools, including: defining schemes of work, learning targets, and student outcomes; developing systems for the appraisal and monitoring of teachers’ work; and the development of school improvement and development plans (Ranson, 2013, p. 466).

A fundamental interest in improving student performance was the driving force behind the New Labour policies, and this detailed technical-rational process likely gave it credibility in the eyes of new professionalists. Yet, classic professionalists have expressed doubt about the efficacy of performance management systems emerging from similar efforts across English-speaking countries. These policies hold educators accountable to measurable goals, but some scholars have expressed concern that there is no coherent theory of action linking performance measurement with improved educational practices and progress toward national educational goals (Bryk, 2015; Husbands, 2001). In addition, the execution and maintenance of performance management systems requires considerable effort on the part of both managers and professionals (Svensson, 2006), raising concerns about the capacity of local education authorities and the best use of resources.

The increased surveillance of teachers generated by these performance management systems instantiates broader trends toward increased hierarchy and diminished autonomy in the era of the new professionalism. Under the “new management panopticism,” heightened scrutiny
may be altering the work of teaching and the subjective experience of teachers (Ball, 2003, p. 219). In one view, school administrators who use performance management tools become “technicians of behavior” who mobilize the language of professionalism, but use managerial techniques to “produce bodies that are docile and capable” (Ball, 2003, p. 219, citing Foucault, 1979, p. 294). The most professional teachers in this context are those who accept regimes of evaluation and accountability, who participate in the surveillance of their colleagues,\(^\text{21}\) and who embrace shared management of teaching and learning (Troman, 1996). As Fournier (1999) explains, managers (in this case district education officials or school-level administrators) can leverage the negative connotations of being called “unprofessional” in order to secure compliance. To be “unprofessional” is to be incompetent or amateurish (Evetts, 2003). Thus, “professional discourse” becomes a tool for “occupational control, motivation, and expectation” (Evetts, 2009, p. 248; see also Freidson, 1994). For example, school administrators typically call any type of training “professional” development or “professional” learning—even compliance training. Application of professional discourse to generic or non-expert learning serves to simultaneously position the teacher as a professional and as a trainee (Beck, 2009).

**Prescriptive Instructional Guidance and the New Professionalism**

Just as shifting teacher evaluation practices in education reflect the performativity of the new professionalism, the broader tension between increasing routinization of tasks and preserving the discretionary nature of professional practice is manifest in teaching. As described in Chapter One, the rise of the new professionalism is associated with wider use of prescriptive instructional guidance. Power to define curriculum and instruction has increasingly shifted away

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\(^{21}\) It is not surprising that teachers unions have historically resisted peer evaluation and other policies that imply some teachers are significantly more effective than others (e.g., merit pay) (Lieberman, 1998).
from teachers (Anderson & Cohen, 2015; Goodson & Hargreaves, 2006; Sinclair et al., 1996). This “tendency for the curriculum to be planned, systematized, and standardized at a central level” in a higher level of the educational system reflects deepening efforts to control the technical core of teaching (Apple & Jungck, 1990, p. 233). Prescriptive instructional guidance aims to standardize lesson content and routinize lesson delivery in order to reduce variation in teaching practice across classrooms (Beck, 2009).

Critics of this trend interpret the introduction of more prescriptive curricula (including those that are fully scripted) as advancing the technification of teaching (Apple, 1986; Barrett, 2009; Bowles & Gintis, 2011; Carlgren & Klette, 2008; Ozga & Lawn, 1988). Through technification, the conception of curriculum becomes separated from its execution (Apple, 2012; Apple & Jungeck, 1990; Carlgren & Klette, 2008; Gitlin, 1983; Valli & Buese, 2007). Put more plainly, prescriptive curricula may remove teachers from the traditional work of lesson development (Sinclair et al., 1996). In shifting from curriculum maker to curriculum deliverer, the teacher becomes a technicist who implements the plans of others (S. Ball, 1994; Carlgren & Klette, 2008), rather than an artisan who crafts curriculum (Huberman, 1993; Talbert & McLaughlin, 2002; Troman, 1996) or a classic professional who draws upon a wealth of theoretical knowledge to exercise pedagogical discretion.

While new professionals argue that specialization in pedagogy or curriculum writing provides new professional pathways for teachers, some scholars warn that such specialization could contribute to deskilling and deprofessionalization (Apple, 1988, 1990; D. Coburn, 1988; Ozga & Lawn, 1988; Sinclair et al., 1996). Specialization fragments the core tasks of professionalized occupations, possibly giving management greater opportunity to control the content of work (Freidson, 1994). At least one study (albeit one with a critical neo-Marxist
perspective) has shown that specializing the role of curriculum developer outside of the classroom led to classroom teachers’ “reskilling” as “classroom managers” who supervised “a predetermined classroom production process” (Carlson, 1987, p. 290). Similarly, Sinclair and colleagues (1996) found that teachers implementing the National Curriculum in the UK were moving toward “a role of classroom minder and curriculum deliverer” (p. 648). Despite the findings of these two studies, the implications of specialization (spurred by separation of curriculum development and instructional development) remain unclear. Gaining insight into potential implications is a fundamental motivation of this dissertation.

Decoupling instructional planning from delivery such that teachers have “less control over selection, sequence, and pace” heralds a shift to a performative model of pedagogic practice (Bernstein, 2000, p. 45). Even without the associated quality measures that intensify scrutiny of teachers, the execution of prescriptive lessons can be performative. Although all instructional delivery involves performance of some kind, performative pedagogy takes this to its extreme:

Teachers stand “on stage” in front of the classroom “audience;” the lectures and student exchanges are “scripts” for the performance; teachers should “rehearse” their presentations; and the teacher/performer must work hard to hold the attention of the audience, with timing, stage presence, and enthusiasm (Sawyer, 2004, p. 12).

In the performative model, pedagogic practices are explicitly prescribed, regulated, and evaluated (Bernstein, 2000). In Bernstein’s (2000) terms, curriculum production recontextualizes (i.e., selectively appropriates and transforms) pedagogic discourse (i.e., the what and how of instruction embedded in a moral and regulative framework). This recontextualization of knowledge for transmission to students increasingly takes place outside of the classroom. Agents
in a pedagogic recontextualizing field (e.g., education agencies, curriculum companies) employ prescribed curriculum in their struggle to control pedagogic discourse (Singh, 2002).

Teachers’ compliance with mandates to deliver pedagogic devices (e.g., prescriptive curricula) as designed is “increasingly subject to monitoring and surveillance from agents both internal and external to the school” (Barrett, 2009, p. 1020). Evaluations of teaching practice often come in the forms of rubrics or checklists of skills (e.g., the Danielson Framework for Teaching) that are abstracted and decontextualized, giving attention to behaviors but not disciplinary content or local culture (L. Jones & Moore, 1993). This reflects a generic competency approach to the regulation of work inherent in the new vocationalism (Beck, 2009; L. Jones & Moore, 1993). In teaching, a competency approach complements the performative model of pedagogical discourse. For example, some alternative teacher training programs rely heavily on how-to guides filled with stock “instructional moves” (e.g., *Teach Like a Champion* by Doug Lemov (2015)) that they hope will prepare teachers to execute prefabricated lesson plans and manage classrooms without necessarily engaging in the intellectually complex work of standards-driven planning.

Professional managers may have public administration skills but lack knowledge of practice. Their movement into the sphere of education, particularly in finance and operations roles, may be related to this rise in emphasis on generic instructional moves over content-specific pedagogy (Gray and Whitty, 2010). Notably, increasing emphasis on the demonstration of individual competencies may be related to a declining significance of academic credentials (Musselin, 2013; Svensson, 2003, 2006). The increasing acceptance of alternate routes to teacher certification and the availability of graduate training for teachers outside of universities (e.g., Relay) may also reflect this trend.
Chapter Two Conclusion

The rise of performativity (Lyotard, 1984) and the new professionalism are changing the nature of academic teaching and learning (Ball, 2003) and could fundamentally restructure teachers’ work and alter the nature of their working experiences (Barrett, 2009; Bernstein, 2000).

In this chapter, I have outlined this shift, tracing its departure from the classic professional that was a dominant theoretical ideal-type in early to mid-20th century Anglo-American sociology and an empirical reality for an elite subset of the Anglo-American middle- and upper-classes until the 1960s. I have shown how new professionalism represents a new occupational structure in which the distinction between professional work (i.e., expert, discretionary tasks) and managerial work is blending. This new structure is characterized by increasing routinization of tasks and surveillance of performance using technical-rational accountability regimes.

This chapter has described some of the ways in which the new professionalism is influencing the roles of teachers. Teachers are increasingly subject to performance management systems that take a decontextualized competency approach to measuring instructional skills. In addition, educational authorities are increasingly routinizing areas of teacher’s work using prescriptive instructional guidance that promotes a performative model of pedagogic practice.

Theories of the new professionalism posit that expertise is becoming abstracted from individuals and embedded in systems rather than in experts (Giddens, 1991; Gray & Whitty, 2010). In 1984, Lyotard predicted that this “exteriorization” of knowledge from the knower and alienation of knowledge from its user would result in the “demoralization of teachers and researchers” (Lyotard, 1984, p. 7). The questions of whether and how expertise is being exteriorized from teachers and whether or not this is demoralizing remain open. A teacher who no longer needs or uses expertise in curriculum development may still have plenty of expertise in other areas of
their practice. A reasonable first step in exploring these questions is to examine the implications of the new professionalism for the knowledge base of teaching and for teachers’ authority and autonomy using empirical cases.

In Chapter Three, I present the conceptual framework that drove the instrumentation and analysis in this dissertation. First, I explain the operationalization of the theoretical constructs presented in this chapter. Then, I present the theoretical constructs and operationalization related to instructional guidance infrastructures and sensemaking in organizations.
CHAPTER THREE: Conceptual Framework

A theoretical foundation that accounts for the phenomenon under investigation is an essential element of research design (Casanave & Li, 2015; Maxwell, 2012; Merriam & Tisdell, 2016). In addition to shaping measurement decisions, a study’s conceptual framework can serve as a starting point for discussion of findings in relationship to existing knowledge and for the iterative processes of typology-building or theory-building that may parallel qualitative data analysis (McGregor, 2018; Tardy, 2010). In this chapter, I present the conceptual framework that guided the research design and data analysis of this dissertation. The framework consists of the major theories (and the constructs that comprise them) that undergirded the inquiry. For each of the major areas of theory, I define relevant constructs and describe how I operationalized them. There are three relevant areas: sociological theories of professionalism, the dimensions of variation in instructional guidance infrastructures, and sensemaking and sensegiving in organizations.

Operationalizing Logics of Professionalism

In Chapter Two, I outlined two descriptive theories of professionalism (i.e., classic and new) drawn from the sociological literature. To an extent, each of these theories represents an ideal-type, but they are rooted in empirical evidence and can serve as valuable tools in analysis of social and economic realities. I have distilled the discussion from Chapter Two into three core constructs: knowledge, authority, and autonomy. In this section, I define these, discuss potentially relevant variation, and describe my measurement strategy. Table 3.1 below

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22 Altruism is also typically included as a core construct in theories of professionalism. As there is only a small degree of variation in altruism across classic and new conceptions of professionalism, I chose to omit it. Also, it did not seem directly relevant to my research questions.
summarizes these three major constructs and their typical characteristics in classic versus new professionalism.

**Table 3.1**

*Logics of Teacher Professionalism*

<table>
<thead>
<tr>
<th></th>
<th>Classic (Occupational)</th>
<th>New (Organizational)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Theoretical, expert</td>
<td>Routinized, generic</td>
</tr>
<tr>
<td>Authority</td>
<td>Jurisdiction over specialized tasks; practitioner is the arbiter of technical validity; internal standards of ethics and performance enforced by colleagues</td>
<td>Managers determine technical validity and monitor performance within technical-rational accountability regimes</td>
</tr>
<tr>
<td>Autonomy</td>
<td>Licensed; considerable discretion undergirded by confidence in social institutions and expertise</td>
<td>Regulated and restricted; earned through performances aimed at satisfying managerial expectations</td>
</tr>
</tbody>
</table>

**Knowledge**

As discussed in Chapter Two, a body of specialized, theoretical knowledge is a core characteristic of classic professional work (Furlong et al., 2000). This body of knowledge is the foundation for the discretionary exercise of knowledge-based technical skills (i.e., situated expertise). In contrast, the new professional’s knowledge consists of generic competencies or skills that lend themselves to standardization and routinization. At the foundation of the new professionalism is an assumption that one can develop and execute technical skills without having abstract knowledge, as long as routinization reduces environmental uncertainty (and thus the need for discretion).

The knowledge base of teaching encompasses “all profession-related insights” or the total relevant “knowledge that a teacher has at his or her disposal at a particular moment”
The dominant conception of professional knowledge in the education policy literature is a three-part typology consisting of content knowledge (CK), pedagogical knowledge (PK), and pedagogical content knowledge (PCK) that originates from the work of Shulman (1986). Interestingly, Shulman originally identified seven categories in the knowledge base for teaching. In addition to CK, PK, and PCK, there was: curriculum knowledge; knowledge of learners and their characteristics; knowledge of educational contexts; and knowledge of educational ends, purposes and values (Shulman, 1987). It is unclear how this seven-part framework became distilled into the three-part framework frequently mobilized by professionalization advocates and teacher education reformers (Darling-Hammond, 2006).

For the sake of parsimony, which was important given that teacher knowledge is one piece of a complex conceptual framework, I use the dominant three-part framework. In my mind, curriculum knowledge, which relates to familiarity with a wide range of available instructional materials and texts, and knowledge of learners both seem to fall under the umbrella of PCK, which includes matching instruction to learner needs. Several scholars writing over the last two decades have also taken this view (e.g., Drake, Land, & Tynimski, 2014; Mishra & Koehler, 2000).

23 At least in part, the development of this framework appears to have been a response to the emergence of an active field of educational research across disciplines and the common omission of consideration of content in that research (Shulman, 1986, 2000).

24 Of course, teachers need extensive knowledge of students’ cultures in order to design culturally-sustaining learning experiences for their students (Ladson-Billings, 1995; Milner, 2003; Paris, 2012; Sleeter, 2001). Shulman’s knowledge of learners and contexts could potentially include this cultural knowledge, but Ladson-Billings (1995), Pallas and Neumann (2019), and others have argued that Shulman paid inadequate attention to this type of knowledge in his writing. Although, I agree that this type of teacher knowledge, which centers students’ identities, is fundamentally important, I ultimately did not include it in this conceptual framework because assessing whether and how networks understood its importance or attended to it in practice would require analysis of the content of curricula. As I explain elsewhere, this was not feasible. I discuss this issue a bit more in later chapters.
Table 3.2 summarizes each of the three areas of knowledge in the dominant framework used here; elaboration and discussion follow the table.

Table 3.2

*Dominant Framework of the Knowledge Base for Teaching*

<table>
<thead>
<tr>
<th>Type of Knowledge</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content knowledge</td>
<td>Knowledge of subject matter, including a discipline’s important facts,</td>
</tr>
<tr>
<td></td>
<td>theories, and methodologies</td>
</tr>
<tr>
<td>Pedagogical knowledge</td>
<td>Knowledge of teaching and learning, including various instructional</td>
</tr>
<tr>
<td></td>
<td>techniques, methods for assessing student learning, and strategies for</td>
</tr>
<tr>
<td></td>
<td>classroom management</td>
</tr>
<tr>
<td>Pedagogical content knowledge</td>
<td>Understanding of <em>how</em> to teach particular content in order to maximize</td>
</tr>
<tr>
<td>(PCK)</td>
<td>the comprehension of particular students in particular contexts</td>
</tr>
</tbody>
</table>

Content knowledge (CK) is subject matter knowledge (Mishra & Koehler, 2006). It refers to substantive knowledge of a subject domain such that “teachers are qualified to teach because they have something to teach” (Neumann & Pallas, 2009, p. 301). It includes knowing “what is so and why it is so” (Shulman, 1986, p. 9). This consists of a discipline’s important facts, theories, and methodologies, as well as knowledge of abstract explanatory frameworks that connect ideas (Mishra & Koehler, 2006; Shulman, 1986). Much of this knowledge is the product of university-based scientific inquiry and theorizing. Additionally, acquisition of this knowledge likely requires long-term, university-based education. As such, it meets the criteria for classic professionalism.

Pedagogical knowledge (PK) is knowledge of teaching and learning. It involves familiarity with the “variety of materials” and the “full range of programs designed for the teaching of particular subjects and topics at a given level” (Shulman, 1986, p. 9). This includes
knowledge of various instructional techniques, methods for assessing student learning, and strategies for classroom management (Mishra & Koehler, 2006). This may be akin to so-called implicit or tacit\(^{25}\) knowledge that is connected to the skills and practical or procedural knowledge common in craft occupations (Carlsgren & Klette, 2008; Svensson, 2003). It seems likely that a taxonomy of “teacher moves” (e.g. Lemov, 2015) is a type of craft knowledge (i.e., discretionary skills without a theoretical basis learned primarily through practice (Freidson, 1999)).

Pedagogical skills alone, divorced from content knowledge and pedagogical content knowledge, exemplify the generic competencies consistent with the new professionalism (discussed at the end of Chapter Two). When these techniques are codified in writing and taught in formal learning environments, their status with respect to conceptions of professionalism is less clear.

Relative to the two other types of knowledge, pedagogical knowledge is clearly the least abstract. However, pedagogical knowledge potentially has some abstract elements, such as philosophies and value systems around child voice and agency. It also may include knowledge generated by university-based scientific research, such as understanding how the phases of human development may affect the efficacy of an instructional strategy (Mishra & Koehler, 2006). When education policies include these elements of PK, they align more closely with classic professionalism than they otherwise would.

The ability to combine content knowledge with pedagogical skill is what Shulman (1986) termed pedagogical content knowledge (PCK). Shulman observed that education research traditionally treated subject (or content) knowledge and pedagogy as exclusive domains.

Shulman introduced the concept of PCK in order to capture and highlight the relationship

\(^{25}\) Tacit knowledge is inarticulate and acquired in the context of practice, through making marginal decisions when faced with multiple constraints (including time) (Patel, Arocha, & Kaufman, 1998).
between content and pedagogical knowledge. He believed proficiency in these two domains was a necessary but not sufficient condition for quality teaching (Mishra & Koehler, 2006). PCK is an understanding of how to teach content that guides teachers as they organize, adapt, demonstrate, explain represent, and transform knowledge to maximize its comprehensibility to particular learners (Shulman, 1986). PCK includes consideration of the diverse interests and abilities of learners, as well as understanding of their prior knowledge and preferred cognitive strategies; it also includes understanding of misconceptions likely to arise with particular material and the best way to redress those misconceptions (Mishra & Koehler, 2006; Schoenfeld, 2011; Shulman, 1986). One may think of pedagogical content knowledge as having three subdomains—knowledge of content as it relates to students, teaching, and curriculum, respectively (Drake et al., 2014).

Empirical research has shown that pedagogical knowledge and content knowledge are interdependent, and that PCK is an emergent property of the interaction between them (Darling-Hammond, 2000). As Shulman (1986) aptly said, “Mere content knowledge is likely to be as useless as content free skill” (p. 8). Both are necessary (but not sufficient) conditions for effective teaching. Much of the research on PCK has focused on its foundational role in teacher planning (Mccutcheon & Milner, 2002; Milner, 2003) and the exercise of discretion in classroom interactions (Hashweh, 1985).

**Approach to Measurement.** In order to uncover conceptions of teacher knowledge at Denizen and Metro, I observed teacher professional learning and asked stakeholders specific questions about what teachers needed to know in order to implement their network’s
instructional guidance infrastructure. During data analysis, I examined the comments of school network officials and school staff, as well as the contents of professional learning sessions and accompanying documents, for discussions of the types of knowledge defined above and for evidence of assumptions about the necessity of each. These constructs were integrated into my codebook.

**Authority**

In sociological theories of professionalism, authority refers to jurisdiction over technical validity. In the context of schooling, technical validity is a matter of what counts as good instruction. As described in Chapter Two, with the emergence of the new professionalism, authority over occupational practice has been shifting away from practitioners to a managerial class. Teachers historically had a great deal of authority over classroom practice, including determining the content and delivery of instruction, until the advent of the standards-based reform movement in the 1990s and the proliferation of high-stakes accountability systems in the 2000s. These developments led to increasing managerial control of instruction by district officials enacting state and federal policy (Beck, 2009).

Due to the fragmented nature of the educational system in the United States, however, there has been considerable variation in the success of those efforts at control, with teachers retaining authority in pockets. Additionally, in places where administrators have formal authority over instruction, many teachers retain informal authority through strategies of resistance (Achinstein & Ogawa, 2006; G. L. Anderson & Cohen, 2015). In general, privatization initiatives in education have introduced a multitude of new actors to an already fragmented...
system, shifting power relations in ways that are still not fully understood (Scott & DiMartino, 2009).

The features of accountability systems are key indicators of organizational power relations and the resulting locus of authority. Under accountability regimes, teacher must “demonstrate responsible actions to some external constituencies” (Helgøy & Homme, 2007, p. 234). As part of the transition from classic to new professionalism, many occupations have moved from “professional accountability,” in which colleagues or practitioners promoted within an organizational hierarchy have the authority to define valid practice and evaluate individuals, to “performative accountability,” in which inspection systems integrate standards of performance determined by the public or policymakers, locating authority with non-practitioners (Ranson, 2003). In many, but not all cases, the managerial class conducts the surveillance required by performative accountability systems. In schools, this change has been visible in widespread shifts from internal evaluation using criteria developed by specialists to publicly-available evaluations using generic criteria and state-sanctioned standardized test scores. Evaluators who are not former teachers are members of the rising managerial class. These recent changes are manifestations of what Foucault (2012) called the “panoptic gaze,” drawing upon earlier work by Jeremy Bentham (1995). This gaze applies disciplinary power to the scrutinized. The subjects of the gaze feels permanently visible, act in accordance with the expectations behind the gaze, and in doing so, reconstruct themselves (Sobe, 2004). When metrics behind performative accountability regimes distort practice in this way (Ball, 2003), then authority over practice has shifted to the externally-developed standards built into those instruments and the people behind their creation.
**Approach to Measurement.** I integrated the above conceptions of authority into my codebook by creating codes for managerial authority and occupational authority that served as indicators of new and classic professionalism, respectively. In coding, I attended to instances in the data where network staff explicitly stated or clearly implied beliefs about who should make decisions about lesson pacing, content, and delivery, as well as decisions about what teachers need to learn and how they should learn. In addition, as part of my infrastructure coding (described later in this chapter), I tracked the components of each network’s accountability system and the processes around its enactment.

**Autonomy**

The occupation of teaching has a long-standing tradition of independent, even isolated, practice (Apple, 1988; J. G. Berger, Boles, & Troen, 2005; Lortie, 1975; Bucelli, 2018; Hatch, 2005; Johnson, 1990). This is partially attributable to the physical structure of schools, in which teachers generally work alone in rooms with their students (Apple, 1988), and scheduling which often gives teachers breaks for planning at different times of day (although this has been changing in recent years). Johnson (1990) found that the fraction of teachers who chose to collaborate with colleagues did so with only a small number of their peers. In general, the limited interaction teachers had centered more around behavior management than academic matters (Lortie, 1975), with teachers spending more time on “story-swapping” than “teaming” (J. W. Little, 1990). Autonomy, however, is distinct from the extent of teachers’ isolation or collaboration.

A “common definition of autonomy is freedom and capacity to act” (Helgøy & Homme, 2007, p. 233), but in the context of this dissertation, autonomy is the degree of occupational control or the scope of agency that teachers have over their practice (Cribb & Gewirtz, 2007).
Classic professionalists have argued that professionals need autonomy because they work in “uncertain situations” that require quick discretionary decision-making (Hoyle & John, 1995, p. 77). In their view, the state should grant teachers the same kind of “licensed autonomy” (see Dale, 1989) enjoyed by law and medicine, in which practitioners have historically “manage[d] their own affairs” (Whitty, 2000, p. 283). Thus, the classic understanding of teacher professionalism is one in which teachers have “extensive autonomy in the classroom” (Helgøy & Homme, 2007, p. 234).

In contrast, new professionalists have claimed that teachers’ requests for autonomy are more about avoiding accountability than managing the unpredictability of the classroom (Lawlor, 1990). Arguing that teachers have taken advantage of their autonomy and served their self-interest at the expense of their students, new professionalists support a shift to a more “regulated autonomy” (see Dale, 1989), in which teachers must answer “to the rigours of the market and/or greater surveillance” from the state (Whitty, 2000, p. 283).

The constructs of authority and autonomy are clearly related, but they are conceptually distinct. As I understand the distinction, authority relates to who determines the validity of practice and autonomy relates to how much control the practitioner has in enacting practice (regardless of whether their choices align with what authorities consider to be valid). As a result, as shown in Figure 3.1, conditions of autonomy (or control) may emerge from the locus of authority.
Approach to measurement. In my analysis of teacher autonomy at Denizen and Metro, I applied codes for licensed or regulated autonomy as they appeared relevant to accounts of each network’s instructional guidance infrastructure and working environment. Following Helgøy & Homme (2007), I attended to “three main indicators of teachers’ professional autonomy: (1) teachers’ control of tasks…, (2) workplace organization and relations, and (3) teachers’ external relations (to clients, employer and government)” (p. 233). In some cases, autonomy and control co-existed (Cribb & Gewirtz, 2007; Hudson, 2007), and I noted this in my data by using “heteronomy” as an emergent code.

In order to be sensitive to the dynamic nature of autonomy (i.e., something that changes in response to organizational conditions and external pressures (Helgøy & Homme, 2007)), I overlaid codes for time periods on instances in the data when stakeholders described shifts in the IGI that altered autonomy. This allowed me to track change over time. Also, in presenting my findings, I took care to remember that although “autonomy is in certain circumstances something to be valued and worth defending or promoting, autonomy does not trump every other good and is not always and everywhere a good thing” (Cribb & Gewirtz, 2007, p. 203).27 Remembering this helped me focus on making empirical, rather than normative, claims.

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27 I am grateful to Professor Deborah Ball of the University of Michigan and Professor Julie Cohen of the University of Virginia for conversations and counsel on this point.
Instructional Guidance Infrastructures

In addition to conceptions of professionalism, the components and dimensions of instructional guidance infrastructures (IGIs) formed a critical piece of the conceptual framework guiding this research. As described in Chapter One, IGIs consist of artifacts, organizational routines, and structures embedded in a social infrastructure of collegial relationships, trust, and mutual commitment (D. K. Cohen, 2011). Table 3.3 below summarizes the framework for the components of IGIs that I derived by synthesizing typologies from across the literature (D. K. Cohen & Bhatt, 2012; D. K. Cohen & Spillane, 1992; Hopkins & Spillane, 2015; Hopkins et al., 2013). I identified these components with descriptive codes and then overlaid thematic codes related to conceptions of professionalism (explained above) and dimensions of variation in IGI design (explained below). I also used the time period codes mentioned above to track changes over time.
Table 3.3

*Elements and Components of IGIs*

<table>
<thead>
<tr>
<th>Element</th>
<th>Component</th>
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<tbody>
<tr>
<td>Instructional Frameworks</td>
<td>Pedagogical guidance</td>
</tr>
<tr>
<td></td>
<td>Learning standards</td>
</tr>
<tr>
<td>Instructional Materials</td>
<td>Curricular materials</td>
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<td></td>
<td>Supplementary texts</td>
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<td></td>
<td>Instructional technology</td>
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<tr>
<td>Assessments</td>
<td>Formative</td>
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<tr>
<td></td>
<td>Summative</td>
</tr>
<tr>
<td>Instructional Oversight</td>
<td>Formal evaluations</td>
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<tr>
<td></td>
<td>Classroom observations</td>
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<tr>
<td></td>
<td>Videotaping</td>
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<tr>
<td></td>
<td>Coaching</td>
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<tr>
<td></td>
<td>Planning routines</td>
</tr>
<tr>
<td>Professional Learning</td>
<td>Workshops</td>
</tr>
<tr>
<td></td>
<td>Professional learning communities (PLCs)</td>
</tr>
<tr>
<td></td>
<td>Instructional rounds</td>
</tr>
<tr>
<td></td>
<td>Structured collaboration</td>
</tr>
</tbody>
</table>

*Note.* Adapted from Cohen & Bhatt (2012), Cohen & Spillane (1992), Hopkins & Spillane (2015), and Hopkins et al. (2013).

One thing that became particularly important during data analysis was to make a clear distinction between pedagogy and curriculum. This distinction helped me parse out which elements of the IGI represented pedagogical guidance (in the instructional frameworks category) and which were curricular materials (in the instructional materials category). Ultimately, this allowed to me assess the relative emphasis that networks placed on content (or subject matter) knowledge versus pedagogical knowledge. Broadly, I began with Bernstein’s (1971) definitions: “curriculum defines what counts as valid knowledge” and “pedagogy defines what counts as
valid transmission of knowledge” (p. 203). More succinctly, curriculum includes what is taught, and pedagogy describes how it is taught. I isolated curricular materials (i.e., curriculum maps, unit plans, lesson plans, pacing guides, and student-facing lesson materials) during the coding process. This allowed me to capture how learning standards influenced network decisions about curricular materials and examine the level of alignment between the standards and materials.

**Operationalizing IGI Dimensions**

In order to capture variation across the elements of each network’s IGI, I sought a theory that would allow me to focus on specific dimensions of an instructional policy. For this purpose, I selected, adapted, and operationalized the three-dimensional policy attributes theory (Floden et al., 1988) to develop an analytical framework consisting of alignment, specificity, and power. Although the original theory described educational policies more broadly, it has been applied to instructional guidance infrastructures (see Cohen & Spillane, 1992). The original theory has also been operationalized as a measure of leadership strength (Floden et al., 1988) and of the strength of policy influence (Clune, 1998; Porter, Floden, & Fuhrman, 1998). In my literature search, I found nine pieces of scholarship that employed the original framework, and of these, only three were empirical studies (Clune, 1998; Floden et al., 1988; Porter et al., 1998). Only Floden and colleagues’ (1988) study addressed teacher professionalism. Thus, my use of the framework is relatively innovative and presents an opportunity to examine its utility as an analytical tool. This is another way in which my dissertation contributes to existing scholarship.

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28 Porter and colleagues (1998) called this dimension “prescriptiveness” and defined it as specificity, but I make a conceptual distinction between these terms. I explain this later in the chapter.

29 Porter and colleagues (1998) called this dimension “authority.” Later, following Floden and colleagues (1988), they used separate dimensions of authority and power (Blank, Porter, & Smithson, 2001). I chose to use the term power because I felt it better captured issues of managerialism (e.g., the source and force of mandates). It also helped avoid confusion given I used the term authority in my framework for analyzing conceptions of professionalism. I explain my understanding of power and its relationship to authority in greater detail below.
Drawing upon the work of Elizabeth Davis and colleagues (Davis & Krajcik, 2005; Davis et al., 2014; Davis, Palincsar, Smith, Arias, & Kademian, 2017), I added educativeness in order to capture the ways in which curriculum materials can promote teacher understanding and support changing practices (Drake et al., 2014; Grossman & Thompson, 2008; Larraín et al., 2017). This resulted in a four-dimensional framework of alignment, specificity, power, and educativeness, summarized in Table 3.4.

Table 3.4
Summary of Framework for IGI Analysis

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alignment</td>
<td>Consistency across and within components of the IGI around what to teach and how to teach it</td>
</tr>
<tr>
<td>Specificity</td>
<td>The level of detail in instructional frameworks and curricular materials, ranging from extensive and focused guidance to limited guidance</td>
</tr>
<tr>
<td>Power</td>
<td>Extent of mandate and compliance monitoring included in IGI implementation</td>
</tr>
<tr>
<td>Educativeness</td>
<td>Extent of which curriculum materials are designed to promote teacher understanding and support change in practice</td>
</tr>
</tbody>
</table>

The following sections expand on the definition of each dimension, explain its significance, and give a short description of its operationalization.

**Alignment.** Alignment (or consistency) is an indicator of coherence across and within policies and instruments around what to teach and how to teach it (Cohen & Spillane, 1992; Desimone, 2002; D. K. Cohen, Spillane, & Peurach, 2018; Floden et al., 1988; Porter, 1989). The elements of an IGI can work “in tandem” or “in tension” (Hopkins & Spillane, 2015, p. 423). When alignment increases, tension decreases. Alignment is not only horizontal (i.e., among
elements of the IGI) but also vertical, capturing the ways in which classroom-level tools of infrastructure are coupled to school- and district-level vision (Mehta & Fine, 2015).

Previous research has shown that high levels of alignment among elements of infrastructure can contribute to instructional improvement when coupled with strong accountability mechanisms (Berends et al., 2002; Bodilly, 1996; C. E. Coburn, Hill, & Spillane, 2016). Both directions of alignment are important for implementation success (Desimone, 2002). Despite this, “historically, most efforts to improve instruction focused on one or two isolated components, aiming to improve instruction by professional development alone, better curriculum alone, more teacher education alone” (D. K. Cohen et al., 2018, p. 2). Lack of alignment with external conditions is a primary reason why the implementation of IGIs such as CSRs are not sustained over the long term (Datnow, 2005). Alignment continues to be a challenge in many locations (Hopkins et al., 2013).

Designers of instructional guidance infrastructures may intentionally build alignment mechanisms. For example, schools, districts, or networks may develop documents that link “particular parts of the curriculum to specific school goals” (Desimone, 2002, p. 439) or support teachers in learning about new instructional materials (Correnti & Rowan, 2007). In my coding, I noted places where stakeholders described alignment or a lack thereof, and I looked for specific mechanisms designed to enhance alignment.

**Specificity.** Specificity relates to the level of detail in guidance given to teachers around content coverage and pedagogy, ranging from extensive and focused guidance (e.g., detailing topics, sequences, materials, methods, time allocations) to weak (e.g., teachers have “great latitude in shaping the content and purposes of their courses”) (Cohen & Spillane, 1992, p. 13). Empirical research has shown that instructional change is more likely when guidance is highly
specific (Bodilly, 1996; Correnti & Rowan, 2007; Nunnery, 1998), but as discussed in Chapter One, there may be unintended negative consequences for the quality of instruction and for teacher satisfaction.

A highly specified curriculum might be “accompanied by curriculum frameworks and guidelines for following the curriculum in terms of supplemental materials and pacing suggestions” (Desimone, 2002, p. 438). In contrast, a less specified curriculum might be a “frame” (Carlsgren & Klette, 2008) that formulates general goals but does not grade the goals by age level or prescribe plans for meeting the goals. A more specified curriculum would specify not only goals but also learning activities, supplemental texts, and expected student outcomes (Carlsgren & Klette, 2008; Desimone, 2002; Porter, 1989).

In order to assess the specificity of the curricular materials in the IGIs at Denizen and Metro, I used a multi-pronged approach. First, for each core content area (i.e., English language arts, mathematics, science, and social studies) and grade, I established whether the network provided teachers with the following materials: goals (or learning objectives), unit plans, lesson plans, pacing guides, and student-facing materials. Examining provision across this range of instructional materials revealed a rough proportion of “coverage” at each network. Higher coverage was an indicator of greater specificity (and the inverse).

Then, I assessed the degree of specificity in lesson plans using a typology of approaches to lesson scripting adapted from Remillard and Reinke (2012), shown below in Table 3.5. I added “no scripting” to make sure that I considered not only what each document contained, but also what it did not, asking if omissions from the texts reflected underlying assumptions about teachers and teaching (Rapley, 2008).
Table 3.5

Typology for Lesson Plan Specificity

<table>
<thead>
<tr>
<th>Scripting approach</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive scripting</td>
<td>No explicit verbal scripting; describes what teachers should say, display, and do in a way that requires some teacher discretion</td>
</tr>
<tr>
<td>Explicit scripting</td>
<td>Specifies sentences to read aloud; specifies words and/or visual models to display; may specify teacher actions</td>
</tr>
<tr>
<td>Blended scripting</td>
<td>Uses explicit and descriptive scripting together for each classroom activity described</td>
</tr>
<tr>
<td>No scripting</td>
<td>Absence of descriptive, explicit, or blended scripting</td>
</tr>
</tbody>
</table>

Note. Adapted from Remillard and Reinke (2012)

As shown below in Figure 3.2, these approaches to scripting influence the level of specificity in the instructional materials. No scripting is the least specified approach. Since explicit scripting includes specific words for teachers to say, it represents a higher degree of specificity than descriptive scripting. Since blended scripting includes a description and an explicit script for each discrete lesson activity, it is more specified than either type of scripting alone. To say it is more specified is not to say that it is more prescriptive, since blended scripting includes a description that implies some discretion, it is more likely that the accompanying script may double as an illustrative example (as explained below in the section on educative features of lesson materials).
In a scan of literature on prescriptive and scripted curriculum, this was the only framework for evaluating specificity in lesson plans that I encountered. This appears to be an emerging area of work. Although my analysis of curricular materials was not as detailed as I would have liked (e.g., it did not extend to formally examining the proportion of each type of scripting within lesson plans), the use of this framework still represents another degree of methodological innovation in the design of this dissertation. In describing the use of scripting approaches for each grade level and subject area, I relied on reports of network staff and school leaders, observations of professional development, examination of documents distributed during professional development, a scan of school websites, and a scan of sample lesson plans.\textsuperscript{30}

**Power.** Power is embedded in positions and processes—the division of labor and organizational rules (Clegg, 1989), as well as disciplinary practices (Foucault, 2012). With respect to IGIs, the dimension of power relates to the extent to which networks made teachers’ implementation mandatory and the degree to which networks monitored teacher compliance (Cohen & Spillane, 1992; Floden et al., 1988). In this formulation, power is really a measure of

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\textsuperscript{30} Unfortunately, a more ideal approach, such as a formal lesson plan sampling procedure with coding of lesson text, was outside the scope of this project, due to constraints of access and capacity. Also, such an approach made sense for an IGI adopted uniformly across schools (e.g., Denizen’s) but was less appropriate for the context of Metro, where teachers used lesson plans from many different instructional programs at their own discretion. Nonetheless, I kept this limitation in mind as I wrote my findings chapters.
intended power, as the scope of this dissertation did not extend to measuring the extent to which teachers’ resisted networks’ campaigns of influence or changed their behaviors in response.

In previous literature, scholars have distinguished between power and authority (Desimone, 2002; Floden et al., 1988; Porter et al., 1998). Desimone (2002) articulated this distinction succinctly:

Policies gain authority through becoming law, through their consistency with social norms, through knowledge or support from experts, or through promotion by charismatic leaders. Power is tied to the rewards and sanctions associated with the policies, such as monetary incentives (p. 439).

I understood power in the latter sense. As shown below in Figure 3.3, a stronger mandate\textsuperscript{31} attached to implementation reflected a higher degree of network power, whereas a weaker mandate located power with teachers. Along this spectrum, a balance of power, in which networks shared power with school leaders and/or teachers was also possible. Under this condition, networks might apply a soft mandate and successfully build-buy in.

\textsuperscript{31} I use the term “mandate” here as shorthand for a range of strategies networks employed to influence teachers working in their schools. In addition to mandates, these included monitoring (i.e., methods for oversight or surveillance), rewards, and sanctions.
Note. In school systems, classrooms are nested within schools, which are nested within networks and/or districts. Actors at each layer of the system exert power. In this necessarily simplified visual, the solid line represents the dimension of network power behind IGI implementation, which falls along a spectrum ranging from a relatively strong network mandate to a weak network mandate. Depending on the extent of network mandate, the locus of power over IGI implementation may ultimately rest at the network-, school-, or teacher-level. The visual does not represent power sharing that may occur across levels of the system. The dotted line represents power that school leaders exert over teachers. Documentation and analysis of this power relation was unfortunately outside the scope of this study.
In order to assess networks’ power, I asked informants specifically about the degree of mandate accompanying various elements of their network’s IGI during data collection. In my analysis of power within each network’s IGI, I worked to capture variation of both kinds, using codes to track components of the IGI that employed mandates, rewards, or sanctions. I gave particular attention to mechanisms of instructional oversight. In Table 3.6 below, I summarize my approach to operationalizing power.

**Table 3.6**

*Operationalization of IGI Power*

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandate</td>
<td>Requirements to use elements of instructional guidance</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Oversight or surveillance techniques to assess implementation of instructional guidance, including the frequency and nature of classroom observations and coaching, as well as requirements to submit documentation and analysis of classroom data</td>
</tr>
<tr>
<td>Incentives</td>
<td>Rewards attached to the implementation of instructional guidance, such as money, titles, public recognition, or a positive performance rating</td>
</tr>
<tr>
<td>Sanctions</td>
<td>Punishments, threats, or high stakes attached to failure to implement instructional guidance, such as deduction in pay, demotion, or a negative performance rating</td>
</tr>
</tbody>
</table>

In addition, I considered the intersection of the dimensions of specificity and power in my analysis. A long-standing tradition in the analysis of curriculum is to distinguish between the official and enacted curricula (Yoon, 2013). Looking at the intersection of these dimensions captures the way in which organizational conditions interact with the official curriculum to produce enactment (although there are other important factors as well). Teachers’ use of highly specified curricular materials depends in part on organizational conditions. For example, the
designers of lesson plans may intend explicit scripts to be optional exemplars, but local school officials may require strict adherence (Timberlake et al., 2017). Alternatively, a commercial curriculum package designed to be read aloud may be ignored by a teacher who is infrequently observed. Considering the intersection of these dimensions enabled me to clearly conceptualize what I meant when drawing a contrast between prescriptive and discretionary instructional guidance. As shown in Figure 3.4, I theorize that an IGI becomes prescriptive when highly specified lessons co-exist with a strong degree of mandate. I consider IGIs with less specificity and a weaker level of mandate to be more discretionary.

**Figure 3.4**

*Prescriptive Versus Discretionary Instructional Guidance*

![Prescriptive Versus Discretionary Instructional Guidance](image)
**Educativeness.** The dimension of educativeness captures the extent to which IGI designers intend for the use of its instructional materials to contribute to adult learning. Learning is one of the primary mechanisms through which instructional guidance infrastructures can promote changes in teacher practices and beliefs (Shirrell et al., 2019). Although I tracked professional learning opportunities\(^{32}\) for teachers, school leaders, and principals at each network, my focus in assessing the level of educativeness at each network was on the design of teacher-facing materials. As Bruner (2009) wrote:

> A curriculum is more for teachers than it is for pupils. If it cannot change, move, perturb, inform teachers, it will have no effect on those whom they teach. It must first and foremost be a curriculum for teachers. If it has any effect on pupils, it will have it by virtue of having had an effect on teachers (p. xv).

Educativeness relates to this effect that curricular materials can have on teachers. For example, lesson materials that include features such as additional background information on lesson content or discussion of connections among the ideas in a lesson may have the potential to support teacher learning and instructional change (D. L. Ball & Cohen, 1996). For example, lesson plans can use text features (e.g., content storylines, student-friendly definitions, and graphics) to highlight “big ideas” for teachers (Davis et al., 2017). Educative features might also include suggesting for differentiating lessons to meet the needs of diverse learners, for alternative pacing, or instructions for other types of adaptations (Davis et al., 2017). These could include illustrative examples, contingency scripts, or pedagogical options (see Table 3.6 below for definitions).

\(^{32}\) Activities in this category fell into two groups: formal outside-of-school opportunities (such as professional learning (PL) workshops, activities hosted by professional associations, and university coursework) and on-the-job activities (such as coaching, intervisitations, and peer observation) (Parise & Spillane, 2010).
The educativeness of an IGI not limited to textual features of lesson plans, but also includes routines built into plans. Routines may generally bring standardization to mind. (They are indeed effective mechanisms for standardizing instruction and aligning it with learning standards (Spillane et al., 2011). Yet, instructional routines may also open discretionary spaces for teachers (Berliner, 1987; Feldman & Pentland, 2003; Leinhardt & Greeno, 1986). In my data collection and analysis, I tried to remain open to both possibilities.

In developing an operational approach to educativeness, I combined the work of Davis and colleagues (2017) and Spillane and colleagues (2011) with Remillard and Reinke’s (2012) typology of structures for customization in lesson plans. Table 3.7 summarizes the features I looked for when scanning lesson plans for evidence of educative design.
Table 3.7

Educative Features of Lesson Plans

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background Information</td>
<td>Additional background information on lesson content or discussion of connections among ideas</td>
</tr>
<tr>
<td>Illustrative Examples</td>
<td>Menu of explicitly scripted language for teachers to choose from, framing the scripts as exemplars</td>
</tr>
<tr>
<td>Contingency scripts</td>
<td>Options for additional activities based on teachers’ assessments of student understanding or variation in pacing</td>
</tr>
<tr>
<td>Pedagogical options</td>
<td>Menu of tasks or activities from which teachers can choose</td>
</tr>
<tr>
<td>Instructional routines</td>
<td>Description of steps for carrying out particular routines that are repeated across lesson plans</td>
</tr>
<tr>
<td>Absence of educative features</td>
<td>No background information, illustrative examples, contingency scripts, pedagogical options, or routines</td>
</tr>
</tbody>
</table>

Note. Adapted from: Davis et al. (2017); Remillard and Reinke (2012); Spillane et al. (2011).

Since the intent in design is an important factor in educativeness, analysis of this dimension depended almost exclusively on stakeholder interviews, rather than on a blend of data from multiple sources.

IGI Dimensions and Logics of Professionalism

These dimensions of IGIs interact, just as their elements do (Hopkins & Spillane, 2015), but to date, there is very little theoretical or empirical work on what this dimensional interaction may look like. Above, in the section on power, I discussed how specificity and power interact to produce IGIs ranging from discretionary to prescriptive. I also hypothesize that alignment influences specificity and power. Namely, it seems reasonable that a more aligned IGI might tend to be more specified and implemented with a stronger mandate than a less aligned IGI,
simply because the alignment requires specification that may not exist without an intentional design effort. Similarly, designers who take care to align all of the elements of an IGI may be more invested in implementation fidelity. In addition, a highly aligned IGI is probably more likely to be educative, since its professional learning is closely linked to its instructional frameworks and materials (an alignment that has been empirically shown to enhance teacher learning (see Chapter One)). Also, greater specificity means instructional materials are more likely to have educative features (and the reverse is true). The left-hand side of Figure 3.5 below illustrates these associations. While they are interesting (at least to me), investigation beyond the thought experiments in this chapter is beyond the scope of this dissertation.

Figure 3.5

*Relationships of IGI Dimensions to Professionalism Constructs*

The importance of Figure 3.5 is in its depiction of relationships among the dimensions of IGIs and the constructs that comprise a logic of professionalism. As I stated at the start of this chapter, my conceptual framework draws from three major areas of theory (i.e., the sociology of the professions, instructional guidance infrastructures, and sensemaking), but using three separate areas of theory does not constitute a unified conceptual framework. It is necessary to
show how these areas of theory relate and posit a working account of the phenomenon under study (Casanave & Li, 2015; Maxwell, 2012; Merriam & Tisdell, 2016). In Chapter One, I applied McLaughlin and Talbert’s (1994, 2007) insight about how educational policies frame teachers’ work to instructional guidance, claiming that as a particular case of educational policy, IGIs do the same. This is reasonable on its face, but now, having described the elements of IGIs and their dimensions of variation, it is important to highlight how these may relate to professionalism. Table 3.8 below summarizes my thoughts about the relationships posited in Figure 3.5.
<table>
<thead>
<tr>
<th>IGI Dimension</th>
<th>Knowledge</th>
<th>Authority</th>
<th>Autonomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alignment</td>
<td>High level of alignment with state learning standards in ELA and Math may lead to less emphasis on content in science and social studies</td>
<td>High level of alignment with standards of practice set by technical-rational accountability systems may locate authority outside of the occupation</td>
<td>Authority located outside of the occupation may lead to restricted autonomy</td>
</tr>
<tr>
<td>Specificity</td>
<td>Certain types of knowledge may be easier to script than others</td>
<td>Creators of highly-specified instructional frameworks, instructional materials, and student assessments claim authority over what teachers and students need to know and be able to do</td>
<td>Highly-specified lesson materials may restrict teachers’ exercise of discretion if administrators mandate their use and frequently inspect instruction</td>
</tr>
<tr>
<td>Power</td>
<td>Decision to enforce implementation of a particular IGI using rewards and/or sanctions may reflect assumptions about the knowledge and expertise of teachers</td>
<td>If enactment of IGI is tied to accountability systems, authority in determining what counts as quality instruction shifted toward creators and implementers of that accountability system</td>
<td></td>
</tr>
<tr>
<td>Educativeness</td>
<td>Decisions to incorporate educative features reflect assumptions about teacher knowledge</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>
Sensemaking and Sensegiving

The sensemaking (and sensegiving) of network actors constitutes the final piece of the conceptual framework. Sensemaking is a process by which people construct understandings of their external reality, assign meanings to that reality, and use this meaning to try to rationalize their actions (Maitlis & Christianson, 2014; Morgan, Frost, & Pondy, 1983; Weick, 1993). These processes lead to “negotiated agreements that attempt to reduce confusion” (Weick, 1993, p. 636) in the face of ambiguity, change, or crisis (Maitlis, 2005; Maitlis & Christianson, 2014; Maitlis & Sonenshein, 2010; Weick, 1993). Often, when facing such disruption, “people look first for reasons that will enable them to resume the interrupted activity and stay in action” (Weick, Sutcliffe, & Obstfeld, 2005, p. 409). This may be one factor in why school practices are so notoriously difficult to change.

To an extent, the concept of sensemaking seems redundant with the tradition in cognitive science that recognized and documented how individuals use their prior experience and knowledge, as well as their environmental context and messages received from superiors and peers, in constructing understanding (Spillane, Reiser, & Reimer, 2002). When people process new information, they assimilate it into existing schemata (or mental frameworks) (Auger & Rich, 2007; Piaget, 1972). Sensemaking extends this tradition by emphasizing the active interpretation involved in comprehension of a situation (Spillane et al., 2002) and creation of a verbal account of it (Gioia et al., 1994; Weick et al., 2005). Sensemaking is a process of “authoring as well as interpretation, creation as well as discovery” (Weick, 1995, p. 8). For this reason, it seemed appropriate for studying the recursive, generative process through which school networks design and redesign their IGIs. Stakeholders interpret changes to an IGI and respond with actions, including revising the IGI.
Sensemaking in Organizations

The concept of sensemaking is also well-suited to study of organizational life. Sensemaking is an inherently social and contextual phenomenon (Coburn, 2001, 2005; Maitlis, 2005; Spillane, 1999; Weick & Sutcliffe, 2003). Although there are sensemaking micropractices at the individual level, sensemaking is “collective in the sense that it is rooted in social interaction and negotiation” (Coburn, 2001, p. 147). In collectivities, individuals share and discuss their understandings and attempt to reach consensus (Weick et al., 2005). For example, Coburn’s study (2001) of a new reading policy showed that teachers developed shared understandings through collective dialogue. In organizations, sensemaking among stakeholders, in which they engage in a “quest for meaning” (Weick et al., 2005, p. 409), is a central activity (Maitlis & Christianson, 2014; Weick & Sutcliffe, 2003). Stakeholders collaborate to confront something unintelligible, apply written and spoken language to categorize their ideas and develop a shared account of the situation, and then discuss actions that the organization should take in response to the situation (Gioia, Thomas, Clark, & Chittipeddi, 1994; Weick et al., 2005). Thus, sensemaking is an essential mechanism in furthering organizational processes (Maitlis & Christianson, 2014).

Sensemaking also plays a role in the institutionalization of new knowledge and practices in organizational norms and structures (C. E. Coburn, 2001; Tsoukas & Chia, 2002). Institutionalization is “a multilevel process of embedding an innovation in the structure and norms of an organization” (Datnow, 2005, p. 23). Institutionalizing new practices is a key concern of IGI designers, especially given high rates of teacher turnover.

Sensegiving in Organizations. As sensemaking occurs all around them, leaders in organizations engage in sensegiving activities. Sensegiving is the process of trying to shape the
sensemaking of colleagues and subordinates toward a preferred interpretation (Gioia & Chittipeddi, 1991). Leaders do this by promulgating their own account of the situation (e.g., by using framing and justifications) and then trying to influence others’ sensemaking to align with their own; one important strategy for success in sensegiving is cultivating legitimacy (i.e., buy-in) (Maitlis & Christianson, 2014; Navis & Glynn, 2011). Essentially, buy-in represents teacher support for the implementation of a policy (Desimone, 2002).

Organizational leaders can foster sensemaking by providing practitioners with routines and structures (e.g., meeting time and place) (Coburn, 2001, 2004). Sensegiving happens when leaders intentionally imbue these sensemaking contexts with specific artifacts or social interactions (Maitlis & Lawrence, 2007). For example, network leaders could set aside time during teacher team meetings for looking at a book that endorses a particular pedagogical approach or listening to a speaker who touts the benefits of a particular curriculum. Attention to sensegiving processes reminds one that organizational actions always reflect power dynamics. Thus, sensegiving as a conceptual tool helps the researcher capture the interplay of sensemaking and power in strategic organizational change (Gioia et al., 1994).

Overall, the concept of sensegiving is quite relevant to the behavior of network actors working to write a new curriculum, train teachers to use it, and cultivate buy-in. Sharma and Good (2013) showed how middle managers, who were embedded in competing and intersecting systems within their organizations, engaged in a sensegiving role as they translated, negotiated, and mediated the demands of upper management for those under their supervision. Similarly, curriculum developers and instructional coaches in my study occupied an intermediate level of the organizational hierarchy (i.e., positioned between the network leaders above them and the school-level practitioners below them) and engaged in both sensemaking and sensegiving.
Interviewing organizational actors at all levels of the hierarchies offered insight into how leaders’ and middle-managers’ sensegiving practices shaped the conditions for, processes for, and objects of the sensemaking of organizational actors (Maitlis, 2005).

**Conceptual Model of the Sensemaking Process**

Using the above theory, I developed a conceptual model of the sensemaking process among staff involved in the ongoing (re)design of a network’s instructional guidance infrastructure (see Figure 3.6 below).

Figure 3.6

*Model of the Sensemaking Process at Denizen and Metro*

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*Note. Adapted from Coburn (2001)*

I started from Coburn’s (2001) model, including the role of messages from the environment and individuals’ beliefs and experiences in informing collective sensemaking processes. Then, based on my reading of the literature, I added the actions taken as a result of sensemaking—redesign of
the IGI and sensegiving activities—including arrows to show the recursive feedback loops involved in the process. These arrows illustrate how organizational actors gather feedback about their activities, engage in sensemaking as they grapple with that feedback, and then revise their strategy for action.

**Analytical Approach to Sensemaking and Sensegiving**

In coding my interview and observation data, I gave careful consideration to what counted as an instance of stakeholder sensemaking, drawing primarily on a framework developed by Coburn (2004). These instances included comments that reflected “cognitive understandings (‘the way things are’), norms (‘the way things should be’), and routines (‘the way things are done’)” (Coburn, 2004, p. 214). Many of these comments were part of narratives that speakers used to talk about their experiences at their networks, schools, or classrooms and assign meanings to those experiences (Brown, Stacey, & Nandhakumar, 2008; Patriotta, 2003).

Instances of sensemaking were also common in portions of conversation where informants were responding to a message from the environment (Coburn, 2001), such as teachers’ reports of their interactions with new curricular resources, their impressions of teacher practices, or policy demands external to the school network. In order to capture sensegiving, I tracked instances where network staff created tools and routines to foster collective sensemaking among practitioners in order to further individual and organizational learning (Christianson, Farkas, Sutcliffe, & Weick, 2009; Maitlis & Christianson, 2014).

When I encountered an instance of sensemaking or sensegiving in my data, I applied a code relating to the constructs comprising logics of professionalism: knowledge, authority,
and/or autonomy. As I coded, I also paid attention to the degree of homogeneity in views expressed in order to develop a sense of whether understandings were shared or contested.34 When they were contested, I looked at patterns of heterogeneity to see if those who agreed held common positions within the organization. I also looked for instances of negotiation among stakeholders with different understandings. Particularly when coding professional development observations, I was able to note conversations in which actors framed and reframed their interpretations of the situation (Coburn, 2001) until those frames aligned (Snow, Rochford Jr, Worden, & Benford, 1986). Frame alignment indicated the emergence of a shared understanding that the group would move forward with (regardless if silent disagreement persisted). In addition, I attended to instances where informants or observation subjects linked their sensemaking to organizational action, such as strategic decision-making, restructuring, or other kinds of organizational change (Gioia & Chittipeddi, 1991; Maitlis & Christianson, 2014).

Analytical Value of the Sensemaking Perspective

The inclusion of sensemaking in the conceptual framework of this dissertation bolsters its analytical power in multiple ways. It also strengthens its contribution to the literature. The sensemaking perspective is a useful tool in empirical research that links a “micro-mechanism” to “macro-change over time” (Weick et al., 2005, p. 419), but a longitudinal approach to sensemaking (e.g., Coburn, 2001) has been relatively uncommon in research to date. Describing the sensemaking process across time in particular contexts can make valuable contributions to generalized understanding of how the process of sensemaking works under different conditions.

34 Only a few scholars have tried to make an operational distinction between individual and collective sensemaking (e.g., März & Kelchtermans, 2013), and of these, very few have done so in the context of educational policy studies or the sociology of education. A notable exception is Cynthia Coburn. Despite her efforts, I agree that a “comprehensive empirical and theoretical account of the social practices and cognitive work that underpin the transition from one level of analysis [i.e., individual] to the other [i.e., collective] is still missing” (Stigliani & Ravasi, 2012, p. 1232). Developing a heuristic for delineating between individual and collective sensemaking was outside the scope of this project. The approach detailed in this paragraph was my solution.
This study’s three-year period of data collection allows for a longitudinal approach.

In addition, organizational decisions are not always rational (Reed, 1991). In organizational analysis (e.g., comparative case studies of organizations), attention to sensemaking helps shift the researcher’s attention to meaning-making (Weick, 1993) and to uncovering the non-rational elements influencing decision-making, such as myths and rituals (March, 1989). The story developed through the process of sensemaking must be plausible, but it is not necessarily accurate (Weick et al., 2005). Attention to these stories can help the researcher understand the motivation behind actions that seem irrational.

Another advantage of sensemaking as an analytic tool is its dynamism: “the language of sensemaking captures the realities of agency, flow, equivocality, transience, reaccomplishment, unfolding, and emergence” (Weick et al., 2005, p. 410). This perspective helps researchers attend to the ongoing, recursive process of decision-making in organizations, moving from a focus on design to redesign (Orton, 2000).

In the context of schooling, attention to sensemaking recognizes the agency of teachers in responding to pressures from the external environment in myriad ways (e.g., adoption, adaptation, resistance) (Coburn, 2001). This helps explain inconsistencies between organizational designs for practice and the enactment of those designs (Orton, 2000). Although this study did not directly measure implementation, stakeholder accounts of implementation and their sensemaking around it (i.e., construction of accounts explaining such gaps) were a key data source for understanding the operation of power and the perceived locus of teaching expertise within each network’s instructional guidance infrastructure.
As described in Chapter One, there has already been quite a bit of empirical research on teachers’ response to and/or implementation of new instructional policies (although not much of this uses the perspective of professionalism). Much of this research has been framed in terms of teacher sensemaking (e.g., C. E. Coburn, 2001, 2005, 2016; März & Kelchtermans, 2013; Schmidt & Datnow, 2005; Spillane, 1999; Spillane et al., 2002). Research on sensemaking among school leaders is less common (C. E. Coburn, 2005), as is a focus on sensegiving. To my knowledge, this is among the first studies to also capture sensemaking and sensegiving among curriculum developers and instructional coaches in networks for school improvement. Maitlis and Lawrence (2007) called for sensegiving research to give more attention to organizational context because of the potential to highlight the important role of contextual features in shaping sensegiving processes. The inclusion of curriculum developers, instructional coaches, and a sensegiving approach in a study of are additional features of this dissertation that contribute to existing literature.

The Place of Sensemaking in the Conceptual Framework

As stated earlier, the conceptual framework for this dissertation integrates three areas of theory: the sociology of the professions, instructional guidance infrastructures, and sensemaking. Again, it is important to show how the constructs from these theories relate to one another. In this section, I synthesize the ideas from the chapter and explain the framework as a cohesive whole. Figure 3.7 below displays the framework in its entirety.
In this framework, I conceptually separate the characteristics of artifactual elements in an IGI from stakeholder sensemaking about those artifacts because they have distinct impacts on networks’ logic of professionalism (and thus working conditions for teachers). Practitioners confront IGI artifacts directly in their daily work and organizational actors often use material artifacts to anchor sensemaking conversations (Stigliani & Ravasi, 2012), but sensemaking is “future-oriented” (Weick et al., 2005) and often the precursor to action (J. R. Taylor & Van Every, 2000; Thomas, Clark, & Gioia, 1993). Thus, explicit attention to sensemaking is important in determining how local actors implement policies (Spillane et al., 2002), including instructional policies.

As shown previously, the location of an IGI along the four dimensions of alignment, specificity, power, and educativeness is related to conceptions of teachers’ knowledge, authority, and autonomy. Variation in the IGI artifacts reflects implicit assumptions about knowledge, authority, and autonomy. Thus, the characteristics of the IGI have implications for the degree
and type of professionalism in teachers’ work. In addition, the elements of the IGI are fodder for organizational sensemaking and thus a key factor in action. Thus, the elements themselves play a role in decision-making about the conditions of their implementation.

All of this interplay shapes the logic of professionalism structuring the role of teachers and thereby influences how teachers experience their daily work. This reflects how sensemaking is an integral part of identity construction at both the individual and organizational levels (Coburn, 2001; Weick et al., 2005). Facing uncertainty leads to questions “such as who are we, what are we doing, what matters, and why does it matter” (Weick et al., 2005 p. 416). Sensemaking processes aim to answer these questions and ultimately help to define normative expectations of who the teacher should be and what the teacher should be doing.

Chapter Three Conclusion

In this chapter, I have presented the conceptual framework for this dissertation. It combines ideas from three areas of theory—the sociology of the professions, instructional guidance infrastructures, and sensemaking—into a unified preliminary account of the important variables in the phenomenon under study. I have defined the constructs in my framework, outlined their relationships to one another, and described my approach to operationalization. In Chapter Four, I delve into the research methodology of the dissertation.
CHAPTER FOUR: Methodology

This chapter presents the methodology of this dissertation, including the research design, case selection and study context, data collection, and techniques for data analysis. In addition, I address issues of reliability and validity, as well as explain the ethical principles that guided my research.

Research Design

This dissertation is a qualitative comparative case study. Qualitative inquiry is an iterative process of viewing “people (including ourselves as investigators), place, and events through multiple and critical lenses” in order to understand social life (Luttrell, 2010b, p. 2). With the aim of methodological coherence (Morse, Barrett, Mayan, Olson, & Spiers, 2002), I chose this method of inquiry because of the alignment between its purposes and my research questions.35

A qualitative research design was appropriate for several reasons. For example, my first research question was largely descriptive, and the end products of qualitative research provide rich description of social phenomena (Merriam, 2002). Further, qualitative research is primarily concerned with the social construction of meaning through the interaction of individuals with one another and with social structures (Creswell, 2007; Giddens, 1984; Luttrell, 2010b; Merriam, 2002). Its methods are appropriate for interpretive investigations (such as this one) that seek to understand “how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences” (Merriam & Tisdell, 2016, p. 6) in a particular time and context (Merriam, 2002). The qualitative approach allows the researcher to access this

35 A study’s design should connect its research questions to its empirical data and ultimate conclusions (Yin, 2009).
insider’s or emic perspective (Hancock & Algozzine, 2017; Merriam, 1998). In sociology of education, qualitative inquiry can produce rich accounts of organizational life that reveal insights into schooling that could remain obscured in quantitative studies (Riehl, 2001). The second research question, which asked about how staff members at school networks make sense of their organizations’ IGIs and how they understand teachers’ work, was precisely this type of question. Finally, qualitative research can enable induction of new theoretical concepts or revision of existing theories, especially where extant theory fails to fully explain the phenomenon at hand (Eisenhardt, 1989; Merriam, 2002). The third research question presented an opportunity to refine existing theories of professionalism in classroom teaching. In developing theory, I attempted to posit parsimonious and logically coherent explanations that were grounded in evidence (Eisenhardt, 1989).

Case study research is a type of empirical social science research design in which researchers study a specific instance of a phenomenon in great depth for a defined period of time, using several data sources (Hancock & Algozzine, 2017; Swanborn, 2010). Case studies can be qualitative or mixed methods in design (Merriam & Tisdell, 2016), but regardless of data types, the case study researcher explores the phenomenon in its context, addressing how and why questions (Merriam, 1998; Yin, 2009). This is particularly helpful when the context (e.g., charter school or affinity school) clearly influences the phenomenon under study (Yin, 2009). In addition, the deep insights afforded by case study methodology make it well suited for the study of sensemaking (Yin, 2009). The method is appropriate for capturing the behavior and beliefs of both individuals (i.e., micro-level actors) and collectivities (i.e., meso- and macro-level actors) (Swanborn, 2010) in order to uncover the meaning that individuals or groups assign to the phenomenon of which they are a part (Hancock & Algozzine, 2017). By using the heuristics
described in Chapter Three to identify instances of sensemaking in the data, I was able to draw inferences about stakeholder perspectives.

Comparative case studies such as this dissertation look across carefully selected cases for patterns of similarity and difference that offer additional insight into the research questions (S. Campbell, 2010; Eisenhardt, 1989). Comparative case studies are well-suited to studying change over time (S. Campbell, 2010). Using a process orientation (Maxwell, 2012), the researcher can “trace” the phenomenon of interest across sites and over time in order to examine how processes unfold (Bartlett & Vavrus, 2017). Taking this stance allowed me to account for change in a way that was consistent with the contextualist\textsuperscript{36} approach in organizational studies, which emphasizes the importance of a holistic, situational look at a phenomenon over time (Pettigrew, 1999). A lack of attention to the setting would risk missing the contribution of contextual variables in the pace and nature of organizational change. My longitudinal data set (described later in this chapter) enabled me to identify continuity and change over time (Pettigrew, 1999) within each network. It also allowed me to attend to the temporal dimension of infrastructure design (Penuel, 2019; Peurach & Glazer, 2011).

A comparative approach can increase the likelihood that a study will develop or refine theory (S. Campbell, 2010; Eisenhardt, 1989). For example, in-depth examination of each case can highlight “particular theoretical categories” in the conceptual framework, which one can synthesize “through comparison to define a framework” or extend existing theory (S. Campbell, 2010, p. 175). While limited external validity (i.e., applicability or generalizability to other cases) is a common critique of case study research (Eisenhardt, 1989), these theoretical contributions (what Tsoukas (2009) called “analytical refinement”) make the findings of the

\textsuperscript{36} Pettigrew (1999) attributes the origins of this tradition to Pepper (1942).
dissertation generalizable. Rather than generalizing from the sample to a population, the findings generalize from the observations to theoretical constructs (Buchanan, 2012). “Enfolding literature” into my discussion (i.e., putting my findings in conversation with a broad sample of extant literature) helped strengthen emergent theory and widen its potential generalizability (Eisenhardt, 1989).

Case Selection

The ability to validly generate or refine theory from a comparative case study, however, is dependent in part on the cases selected being representative instances of the broader empirical phenomenon under study (Buchanan, 2012). As described in Chapter One, the rising use of prescriptive instructional guidance is a nationwide trend that dates back to the 1960s (Porter, 1989) and has continued to expand in recent years (King & Zucker, 2005; Valli & Buese, 2007). Since the reorganization of the NYCDOE in 2015, multiple networks operating in NYC, including Denizen CMO and Metropolitan Schools, have started giving more prescriptive guidance to their schools (Duff et al., 2019; Duff et al., 2018; Lyle, 2019).

The three citations at the end of the previous sentence represent work emerging from a three-year, Spencer-funded study of the implementation of CCLS in NYC. As footnoted in Chapter One, I was a part of the research team for this study and a co-author on two of these pieces (the other is the doctoral dissertation of my colleague Dr. Angela Lyle). This study team collected much of the data used in this dissertation.37 Thus, earlier analytical work on these data helped me to sketch rough descriptions of the IGIIs at the networks in that study. This enabled me to select appropriate cases for comparison that would speak to the research questions of this

37 The research team included Professor Priscilla Wohlstetter (Principal Investigator), Dr. Diane Massell (co-PI), Dr. Angela Lyle, and Megan Duff.
dissertation. Analyzing that data again through a different\textsuperscript{38} set of conceptual lenses, in conjunction with new data I collected independently, enabled me to verify, refine, and significantly deepen my initial assessment of the IGIs. I share these descriptive findings in Chapter Five and analyze the implications of the IGIs for teachers’ work in Chapter Six.

Based on my initial assessment of the data collected by the larger research team, Denizen CMO and Metropolitan Schools were appropriate cases for comparison because of the contrast in the nature of guidance they provided and the conditions of implementation. In general, it is helpful for the researcher to select cases that function as “polar” types that represent the extremes of variation in the phenomenon under study (Eisenhardt, 1989; Pettigrew, 1990). Denizen and Metro met this criterion for three reasons: 1) the networks operated in different sectors (i.e., charter versus non-profit); 2) as a result, they had very different organizational cultures and appeared to differ greatly in the extent to which they attached mandates and/or monitoring to the elements of their IGI; and 3) although both had recently developed instructional materials that were more specified than their previous materials, Denizen’s materials appeared to be highly-specified and Metro’s appeared to be much more discretionary.\textsuperscript{39}

It is also important for selected cases to have sufficient commonality to permit comparison (S. Campbell, 2010). Despite not being experimental, comparative case studies are vulnerable to threats to validity from history and maturation, particularly in studies (like mine) where the periods of data collection do not completely align in terms of calendar dates or duration (S. Campbell, 2010). A history threat to validity occurs when events unrelated to the phenomenon of interest that occur during the time period of the study and affect outcomes.

\textsuperscript{38} Previous analyses and writing used the lenses of organizational learning and Principal-Agent theory.

\textsuperscript{39} In Chapters Five and Six, I refine these initial assessments and provide substantive evidence for my characterizations of the IGIs.
(Shadish, Cook, & Campbell, 2002). Selection of cases operating in the same city and school system, as well as collection of data in overlapping time periods, helped mitigate this threat to an extent. A maturation threat to validity occurs when subjects or organizations become older and wiser over time (Babbie, 2015). Although there was not complete alignment in the periods of data collection, the total length of time in the field at each organization was similar (i.e., 20 and 22 months).

**Study Context**

Denizen Schools (Denizen) is a charter management organization (CMO) managing a network of approximately 20 schools, 10 to 12 of which are in NYC. Denizen founded many of its schools, but some are turnaround models. The network’s other schools are spread across five additional metropolitan areas in multiple U.S. states, and they have plans for continued nationwide expansion (Duff et al., 2018). Explicitly focused on college preparation for 100% of students, the network’s schools have extended days and emphasize data-driven decision making for staff (Duff et al., 2018). Like many other CMOs (Golann, 2015), Denizen employs controversial “no-excuses” disciplinary practices, which are characterized by four common features: 1) comprehensive regulation of student behavior akin to “broken windows” policing, 2) clarity in expectations, 3) consistency in enforcing expectations for behavior, and 4) systems of positive and negative consequences for compliance with expectations (Golann & Torres, 2018). Denizen’s population of low-income, minority students perform at high levels on standardized tests.

Metropolitan Schools (Metro) is a non-profit organization in NYC serving as an affinity partner for approximately 20 regular district middle and high schools across the city. Metro’s schools span a wide range of pedagogical philosophies, but they are all small home-grown
schools centered around themes designed to unify school culture and increase student engagement. In contrast to Denizen’s nearly exclusive focus on college readiness, Metro emphasizes career readiness as well. Metro schools each have a set of partners (e.g., post-secondary, industry, private, and public) connected to the themes that provide enrichment opportunities such as internships to students. Many of the schools have formalized pathways in career and technical education (CTE). As shown in Table 4.1 below, the networks are of a similar size and serve similar populations.

**Table 4.1**

*Comparison of Denizen and Metro*

<table>
<thead>
<tr>
<th></th>
<th>Denizen CMO</th>
<th>Metropolitan Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Founding</td>
<td>10-15 years ago</td>
<td>20-25 years ago</td>
</tr>
<tr>
<td>Sector</td>
<td>Charter management organization</td>
<td>Non-profit affinity partner</td>
</tr>
<tr>
<td>Total schools</td>
<td>About 20</td>
<td>About 20</td>
</tr>
<tr>
<td>Total enrollment</td>
<td>6,000 – 8,000</td>
<td>8,000-10,000</td>
</tr>
<tr>
<td>Student population</td>
<td>95-99% students of color</td>
<td>95-99% students of color</td>
</tr>
<tr>
<td></td>
<td>85-90% free and reduced lunch</td>
<td>85-90% free and reduced lunch</td>
</tr>
<tr>
<td></td>
<td>15-20% students with disabilities</td>
<td>15-20% students with disabilities</td>
</tr>
<tr>
<td>Schools</td>
<td>5-7 high schools</td>
<td>10-15 high schools</td>
</tr>
<tr>
<td></td>
<td>5-7 middle schools</td>
<td>8-10 secondary schools</td>
</tr>
<tr>
<td></td>
<td>2-4 elementary schools</td>
<td>2-4 middle schools</td>
</tr>
</tbody>
</table>

Metro’s schools were traditional public schools belonging to the NYCDOE. NYCDOE consists of 32 community school districts, each with a superintendent and superintendent’s office. In addition, there are borough-based high school superintendents, affinity superintendents, and a superintendent for District 75 (special education schools). One affinity superintendent supervised
nineteen of Metro’s schools (the secondary and high schools). Each of Metro’s middle schools was accountable to a community school district superintendent.

Data

This study used five types of qualitative data: interview data, observation data, focus group data, and assorted documents (artifacts). As mentioned earlier, the periods of data collection at each organization were not completely aligned. The overall period lasted from February 2016 to May 2019. I hoped that this “prolonged engagement” would be sufficient for adequately representing the phenomenon under study in my data (Onwuegbuzie & Leech, 2007). Later, during analysis and writing, I scanned websites and examined sample lesson plans from commercially-available curricula (when mentioned in the data) on an as-needed basis. As shown in Figure 4.1, data collection at Metro took place during one 23-month period from February 2016 to January 2018. My colleagues (from the larger study mentioned earlier) and I collected these data as a team.

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40 The research team conducted the majority of these interviews in person. Some were conducted over the phone, and two follow-up interviews used an email modality.

41 I discuss data adequacy and saturation later in this chapter.
At Denizen, data collection was broken into Phase One (P1) and Phase Two (P2). Phase One lasted 16 months from March 2016 to July 2017. Again, data collection was a team effort. Preliminary analysis of Phase One data led to the formulation of additional questions for Phase Two of the project, which featured additional interviews and document collection. These were specifically targeted at understanding the nature of the instructional materials that Denizen was writing. I collected Phase Two data in May 2019. Thus, total time in the field totaled 17 months. There was no need for Phase Two data collection at Metro, as they were not engaged in the same type of curriculum production and revision. I obtained sufficient information about Metro’s provision of instructional materials and the beliefs underlying its IGI design from the data collected through January 2018. Using preliminary analyses to make decisions about additional data collection is a recommended practice for achieving saturation in the data (discussed more later) (Morse, 2015).

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42 I also collected survey data across the Denizen network, but these data were not usable due to small cluster size. Therefore, I have removed them from description of the research design.

43 This timing was not related to any particular events at the network. It was a function of joint availability.
**Interview Data**

Interviews give researchers access to informants’ interior experiences in the past or present, including their perceptions and observations, subjective perspectives, and processes of meaning-making (Brinkmann & Kvale, 2015; Weiss, 1994). They are a particularly useful method for uncovering thinking tied to environmental changes and decision-making (Pugh, 2013). For this reason, they are an appropriate tool for studies of sensemaking.

The 42 interviews conducted for this study were semi-structured. The interview protocols (or guides) consisted of “pre-determined but open-ended questions” and built-in probes for likely follow-up questions (Ayres, 2008, p. 810). Prior to the start of data collection, we drafted protocols for each stakeholder role in the study (i.e., network administrator, curriculum developer, school leader, instructional coach, and teacher leader). In order to enhance the reliability of the interview data, we repeated questions across protocols in order to garner multiple perspectives on the same issues.

Before each interview, we made slight adjustments to these template protocols in order to customize a protocol for the organization and position of informants. Interviewers used the protocols flexibly depending on the contents of the conservation; when something of relevance arose, we used our discretion in altering the sequence of questions or going off-script (Brinkmann & Kvale, 2015). This flexibility enhanced the detail and depth of informant responses (Weiss, 1994).

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44 Denizen called people in this role “curriculum specialists,” so I use this term in my findings chapters.

45 In qualitative research, reliability is concerned with the “consistency, stability and repeatability” of informant accounts as well as the “investigator’s ability to collect and record information accurately” (Selltiz, Wrightsman, & Cook, 1976, p. 182).
As Swanborn (2010) stated, “data collection naturally implies selection” (p. 137), and it is important to document the selection process. The research team purposefully selected interview informants based on their organizational position and role in development and implementation of curriculum (Swanborn, 2010). We identified some informants using publicly available organizational information and others through snowball sampling as informants mentioned their colleagues. At both networks, we interviewed informants at multiple levels of the organization. Interviews with network leaders, including founders, presidents, chief executive officers, and vice presidents provided important context regarding organizational history, culture, and strategy. In choosing whom to interview among the staff at network hubs, we focused on people who were directly involved in creating instructional guidance, implementing that guidance, and/or training school-level personnel to use that guidance. People serving as content area specialists, coaches, and facilitators of professional learning were of particular interest. The research team also spoke with some school-level personnel, including a small number of principals and assistant principals. (We also conducted a focus group with five teachers at one Metro school.) Table 4.2 lists the position titles for all of the interview informants at Denizen, and Table 4.3 lists the titles of informants at Metro and its collaborators (i.e., Novel, the AFSC, and the Affinity SO).
Table 4.2

Interview Informants at Denizen

<table>
<thead>
<tr>
<th>Organizational Level</th>
<th>Position</th>
<th>Interview Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network leadership</td>
<td>Chief Executive Officer</td>
<td>4/22/16</td>
</tr>
<tr>
<td></td>
<td>Superintendent</td>
<td>4/22/16</td>
</tr>
<tr>
<td></td>
<td>Vice President for Talent Development</td>
<td>8/1/2016</td>
</tr>
<tr>
<td></td>
<td>Assistant Regional Superintendent</td>
<td>8/4/2016</td>
</tr>
<tr>
<td>Network Staff</td>
<td>Director of K-12 Curriculum and Instruction</td>
<td>4/22/16</td>
</tr>
<tr>
<td></td>
<td>Chief of Staff</td>
<td>4/22/16</td>
</tr>
<tr>
<td></td>
<td>Assistant Director of K-12 Curriculum</td>
<td>5/3/19</td>
</tr>
<tr>
<td></td>
<td>ELA Specialist A</td>
<td>5/3/19</td>
</tr>
<tr>
<td></td>
<td>Elementary Science and Social Studies Specialist</td>
<td>5/3/19</td>
</tr>
<tr>
<td></td>
<td>Math Specialist A</td>
<td>7/6/17, 5/3/19</td>
</tr>
<tr>
<td></td>
<td>ELA Specialist B</td>
<td>5/15/19</td>
</tr>
<tr>
<td></td>
<td>ELA Specialist C</td>
<td>5/15/19</td>
</tr>
<tr>
<td></td>
<td>Math Specialist B</td>
<td>5/15/19</td>
</tr>
<tr>
<td></td>
<td>Middle and High School Science Specialist</td>
<td>5/15/19</td>
</tr>
<tr>
<td></td>
<td>Middle and High School History Specialist</td>
<td>5/15/19</td>
</tr>
<tr>
<td>School</td>
<td>Principal A</td>
<td>10/4/16</td>
</tr>
<tr>
<td></td>
<td>Principal B</td>
<td>10/24/16</td>
</tr>
<tr>
<td></td>
<td>Assistant Principal</td>
<td>10/24/16</td>
</tr>
<tr>
<td>Entity</td>
<td>Level</td>
<td>Position</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Metro</td>
<td>Network leadership</td>
<td>Founder</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td></td>
<td>Staff</td>
<td>Director of School Support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chief of Staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Director of Career and Technical Education</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Director of Academics and Leadership†</td>
</tr>
<tr>
<td>School</td>
<td></td>
<td>Principal†</td>
</tr>
<tr>
<td>Leadership</td>
<td></td>
<td>Vice President of Curriculum and Instruction</td>
</tr>
<tr>
<td>Novel</td>
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<td>Staff</td>
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<tr>
<td></td>
<td></td>
<td>Instructional Specialist A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Instructional Specialist B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Formative Assessment Specialist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social Studies Specialist A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social Studies Specialist B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Math Specialist A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Math Specialist B</td>
</tr>
<tr>
<td>AFSC</td>
<td>Leadership</td>
<td>Director</td>
</tr>
<tr>
<td></td>
<td>Staff</td>
<td>Borough Instructional Lead</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Math Specialist</td>
</tr>
<tr>
<td>SO</td>
<td>Staff</td>
<td>Teacher Development Evaluation Coach</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Field support liaison</td>
</tr>
</tbody>
</table>
Note. The research team interviewed some informants in pairs. This list represents a total of 24 interviews. Five teachers who participated in focus group are not listed here.

† Also participated in focus group on 5/15/17 after a school leadership team meeting

We interviewed some individuals twice, once near the beginning of data collection and once toward the end, in order to capture change over time. Conversations with informants during Phase One centered around organizational structure, interactions with other entities in the organizational environment, the provision of curricular and instructional supports, and the politics of Common Core implementation in NYC. In addition, sections of the interview protocols specifically targeted sensemaking activities, decision rights and incentives (i.e., who held decision-making authority, which was relevant to questions of network power in IGI implementation and to authority over teaching practice), and organizational embedding and encoding (i.e., processes of institutionalizing the knowledge of practice that offered clues into undergirding understandings of the nature and locus of that knowledge). In Phase Two, interview questions specifically targeted informants’ roles in the development of curricula and their beliefs about the nature of teachers’ work. In two cases, we conducted short follow-up interviews through email.

As shown in Tables 4.2 and 4.3, the interview sample was largely concentrated at the network-level, rather than the school-level. These data helped me to address the core issue in the research questions regarding the implicit logic(s) of professionalism operating at the network-level. Although the school-level interview data pool was smaller, it was complemented by

46 Appendix A contains interview protocols from Phase One, and Appendix B contains the protocol for Phase Two interviews.
observations of school leaders and teachers at professional learning events (summarized in the next section). Together, these data allowed me to assess power relations among network- and school-level actors and corroborate (or disconfirm) conclusions about the network’s approach to teacher knowledge, authority, and autonomy. The nature of the school-level data (i.e., small quantity and limited coverage across network schools) limited my ability to assess the response of school leaders and teachers to their network’s instructional guidance. Since such an assessment was outside the scope of the research questions, this limitation was not a concern. It represents a compelling opportunity for future research.

Observation Data

The research team observed 22 professional learning (PL) events led by network personnel for leaders and teachers at Denizen and Metro schools; these events constituted 51 total hours of observation. Observations added an important dimension to the data set because they happened “in the setting where the phenomenon of interest naturally occurs” (Merriam & Tisdell, 2016, p. 137). In contrast with the secondhand accounts generally given by interview informants, the data obtained through field observations represented a “firsthand encounter with the phenomenon of interest” (Merriam & Tisdell, 2016, p. 137). Used in conjunction with other types of data (such as interviews or document analysis), researchers can use observations to triangulate (and thereby substantiate) findings (Merriam & Tisdell, 2016).

In the context of this dissertation, stakeholders’ descriptive accounts of professional learning and instructional oversight were secondhand accounts. Observing professional

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47 I define an event as a delineated period of time dedicated to a particular purpose. For example, if a network split a day of professional learning into four segments, each with a different topic and title, I counted this as four events. Tables 4.4 and 4.5 illustrate that multiple events took place on the same day. In these cases, the events were at the same location with the same participating audience.
learning brought us closer to this area of the IGI, giving us firsthand access to organizational activities that were part of the phenomenon under study. In addition, the real-time data generated through observations (combined with data triangulation during analysis, described below) helped to offset the potential insertion of biases from retrospective accounts given during interviews (Golden, 1992).

These observations also enabled the research team to see whether and how staff were structuring opportunities for teachers and leaders to engage in sensemaking. The data complemented the instances of informants’ sensemaking and sensegiving in the interview data. This methodological triangulation (i.e., using multiple methods of data collection) helped build a richer and thicker data set (Onwuegbuzie & Leech, 2007). For these observations, we purposefully selected professional learning sessions to observe that were relevant to CCLS implementation and appeared typical of the sponsoring network. Many of these PL sessions explicitly trained practitioners in the use of new curriculum resources. Other sessions addressed issues that may seem more tangential to instructional guidance, but these sessions provided insight in accountability practices, power relations, and autonomy at each network. For example, a session on human resources at Denizen illustrated how the network instructed school leaders to evaluate teachers. Table 4.4 lists the professional learning events observed at Denizen. Table 4.5 lists events at Metro and related organizations who hosted professional learning for Metro’s school leaders and teachers.

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48 In order to protect privacy, networks would not let us directly observe routines for instructional oversight.
### Table 4.4

*Field Observations at Denizen*

<table>
<thead>
<tr>
<th>Event</th>
<th>Facilitator(s)</th>
<th>Participants</th>
<th>Date(s)</th>
<th>Duration (hrs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer Leader PL Welcome Breakfast</td>
<td>Chief Executive Officer (CEO)</td>
<td>School leaders</td>
<td>6/27/16</td>
<td>0.5</td>
</tr>
<tr>
<td>Setting your Team up for Success</td>
<td>CEO, Vice President of Talent Development (VP of TD), Regional Superintendent</td>
<td>School leaders</td>
<td>6/27/16</td>
<td>3.75</td>
</tr>
<tr>
<td>Vision Setting</td>
<td>CEO, VP of TD, Regional Superintendent</td>
<td>School leaders</td>
<td>6/27/16</td>
<td>1.5</td>
</tr>
<tr>
<td>Coaching Teachers</td>
<td>Regional Superintendent</td>
<td>School leaders</td>
<td>6/28/16</td>
<td>1.5</td>
</tr>
<tr>
<td>Planning PL for the Year</td>
<td>VP of TD</td>
<td>School leaders</td>
<td>6/28/16</td>
<td>2</td>
</tr>
<tr>
<td>Data Literacy &amp; School Trips</td>
<td>Regional Superintendent, Director of Data and Analytics, VP of TD, Overnight Trip Coordinator</td>
<td>School leaders</td>
<td>6/28/16</td>
<td>2</td>
</tr>
<tr>
<td>School Review</td>
<td>VP of TD, Regional Superintendent</td>
<td>School leaders</td>
<td>6/29/16</td>
<td>2</td>
</tr>
<tr>
<td>Network Operations</td>
<td>CEO, VP of TD</td>
<td>School leaders</td>
<td>6/29/16</td>
<td>2</td>
</tr>
<tr>
<td>Academic Content</td>
<td>Regional Superintendent, Curriculum team</td>
<td>School leaders</td>
<td>6/30/16</td>
<td>3</td>
</tr>
<tr>
<td>Human Resources</td>
<td>VP of TD, General Counsel</td>
<td>School leaders</td>
<td>6/30/16</td>
<td>2</td>
</tr>
<tr>
<td>Sharing Best Practices</td>
<td>CEO, Regional Superintendents</td>
<td>School leaders</td>
<td>6/30/16</td>
<td>1</td>
</tr>
<tr>
<td>Adult Culture</td>
<td>CEO, Vice President of Human Resources</td>
<td>School leaders</td>
<td>6/30/16</td>
<td>1.5</td>
</tr>
<tr>
<td>Event</td>
<td>Facilitator(s)</td>
<td>Participants</td>
<td>Date(s)</td>
<td>Duration (hrs.)</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------------------------------</td>
<td>------------------------</td>
<td>---------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Intellectual Preparation for History</td>
<td>Vice President of Human Resources, History Specialist</td>
<td>History teachers</td>
<td>3/3/17</td>
<td>2.5</td>
</tr>
<tr>
<td>Interim Assessment Data Analysis and Planning</td>
<td>Math, History, and Assessment Specialists</td>
<td>Math and history teachers</td>
<td>3/31/17</td>
<td>2.25</td>
</tr>
</tbody>
</table>

*Note.* School leaders included principals, assistant principals, and campus directors (i.e., administrators in charge of campuses hosting multiple Denizen schools).
<table>
<thead>
<tr>
<th>Entity</th>
<th>Event</th>
<th>Facilitator(s)</th>
<th>Participants</th>
<th>Date(s)</th>
<th>Duration (hrs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Leader PLC</td>
<td>Metro’s Director of Academics and Leadership, AFSC BIL</td>
<td>Teacher leaders from across Metro’s network</td>
<td></td>
<td>3/30/2017</td>
<td>4.75</td>
</tr>
<tr>
<td>Principal’s meeting</td>
<td>Metro’s Director of Academics and Leadership, Chief of Staff, and CEO</td>
<td>Principals from across Metro’s network</td>
<td></td>
<td>10/19/2016</td>
<td>3.25</td>
</tr>
<tr>
<td>Metro</td>
<td>HS leadership team meeting</td>
<td>Metro’s Director of Academics and Leadership</td>
<td>School leadership team and school principal</td>
<td>5/15/2017</td>
<td>0.75</td>
</tr>
<tr>
<td>HS Math Department</td>
<td>Math Department Chair</td>
<td>Math teachers</td>
<td></td>
<td>3/27/2017</td>
<td>0.75</td>
</tr>
<tr>
<td>Teacher Team Meeting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS Social Studies</td>
<td>Social Studies Department Chair</td>
<td>Social studies teachers</td>
<td></td>
<td>3/29/2017</td>
<td>0.75</td>
</tr>
<tr>
<td>Department Teacher Team Meeting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Novel</td>
<td>Global History 10th Grade Summer PL</td>
<td>Novel Social Studies Specialists</td>
<td>Social studies teachers from across Novel and Metro’s networks</td>
<td>8/24/16, 8/25/16</td>
<td>5.5</td>
</tr>
<tr>
<td>AFSC</td>
<td>New Global History Regents PL</td>
<td>AFSC Social Studies Specialist</td>
<td>Teachers from Affinity Schools across NYC, including Metro teachers</td>
<td>8/2/2017</td>
<td>5.25</td>
</tr>
</tbody>
</table>
Observations of these sessions had unstructured and structured components. Observers took comprehensive, chronological, low-inference field notes at each session. Much of the notes consisted of verbatim notes of what was said and by whom. In addition, observers completed a structured “code sheet”\(^{49}\) that recorded “instances of specified behavior” (Merriam & Tisdell, 2016, p. 140) such as mention of a particular framework relevant to curricular instructional support (e.g., the Danielson (2013) *Framework for Teaching*, the Common Core Learning Standards, EngageNY, etc.) or the configuration of learning activities (e.g., listening to facilitators, small-group discussion, independent reading, etc.).

Two observers\(^{50}\) attended almost every professional development event. In many cases, participants were split into groups for breakout sessions, and observers observed different sessions at the same event. As a result, there were two sets of field notes for many of the events. The observers combined these notes after the observation, a practice which served to capture more detail than possible with one observer alone and to corroborate the accounts of each observer, enhancing reliability. In the rare case of inconsistent accounts in the field notes, data were discarded. Overall, the observations provided rich opportunities to witness stakeholders engaging in sensemaking and sensegiving and to see the conditions under which this took place (Maitlis & Lawrence, 2007).

At both interviews and observations, members of the research team, including myself, collected artifacts for document analysis. These included: organizational charts, network plans, goal statements, sample curricula, slide decks, and handouts for PL participants. Finally, the

\(^{49}\) Appendix C contains copies of these code sheets.

\(^{50}\) Brielle McDaniel, Chelsea Guthrie, Nick Anderson, Melissa Marcus, Matt Gonzales, and Natalie Proulx (all former masters students at Teachers College) assisted the research team with this. I am grateful for their contribution.
research team conducted one focus group with a teacher team at a Metro school. Table 4.2 below lists total quantities of each type of data at the close of data collection.

**Table 4.6**

*Final data set*

<table>
<thead>
<tr>
<th></th>
<th>Denizen CMO</th>
<th>Metropolitan Schools</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviews</td>
<td>18 (17 individuals)</td>
<td>24 (22 individuals)</td>
<td>42 (39 individuals)</td>
</tr>
<tr>
<td>Follow-up emails</td>
<td>--</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Focus group</td>
<td>--</td>
<td>1 (7 individuals)</td>
<td>1</td>
</tr>
<tr>
<td>PL observations</td>
<td>30 hours</td>
<td>18.75 hours</td>
<td>48.75 hours</td>
</tr>
<tr>
<td>Meeting observations</td>
<td>--</td>
<td>2.25 hours (3 meetings)</td>
<td>2.25 hours</td>
</tr>
<tr>
<td>Document artifacts</td>
<td>Slide decks, curriculum samples, handouts, meeting agendas, strategic plans, organizational charts</td>
<td>--</td>
<td></td>
</tr>
</tbody>
</table>

Note that the totals for Metropolitan Schools (above in Table 4.2) include some data collected at another non-profit affinity partner operating in NYCDOE, Novel. Metro and Novel were thought partners and collaborators in many respects. For example, Metro used some of Novel’s curricula, professional learning, and data tools as part of its IGI. In addition, the total includes three interviews with personnel from a superintendent’s office and the Affinity Field Support Center (AFSC), two NYCDOE entities that interacted with Metro and its schools. My

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51 We had hoped for several focus groups, but both networks wanted to protect teachers’ time.
decision to include these data was part of the process of establishing boundaries to delimit the case as I thought most appropriate given the context (Creswell, 2007; Merriam, 1998; Miles & Huberman, 1994; Yin, 2009).

In summary, I aimed to build a data set that met criteria for informational adequacy: relevance to the research questions, completeness with respect to coverage of the full range of variation in the phenomenon, and a sufficient quantity of information (Morse, 1991). In assessing adequacy, I asked whether the data had achieved saturation and whether the theory emerging from my analysis (see Chapter Eight) made sense (Morse, 1991). Saturation is the “point at which no new information or themes are observed in the data” (Guest, Bunce, & Johnson, 2006, p. 59). Data saturation requires data that are rich (i.e., of sufficient quality and depth) and thick (i.e., of sufficient quantity) (Fusch & Ness, 2015). The methodological triangulation across interviews and observations built into the design helped to deepen the data (Denzin, 2012).

**Data Analysis**

In analyzing the data set emerging from the case studies of Denizen and Metro, I was mindful that I had delimited each case along organizational boundaries. Thus, I chose to approach the data with perspectives from the tradition of organizational analysis (von Rosenstiel, 2004). This tradition recognizes that organizations are “structural elements of a wider structure which they reflect and from which they derive their existence and true significance” (Burrell & Morgan, 1979, p. 368). Thus, organizations are an appropriate locus for observing the mechanisms driving broader societal processes (Boreham, 1983). I hoped that approaching the data from an organizational perspective would help me unpack how the networks in my study,  

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52 In research of this nature, analysis can inform the decision to collect additional data, changing the research design (Maxwell, 2005), but in the case of this dissertation, my advisor and sponsor, Professor Aaron Pallas, recommended against this approach for pragmatic reasons.
which were clearly cases of the trend toward more prescriptive instructional guidance, might also be illustrative of broader trends toward the new professionalism.

Drawing from this tradition, I considered not only organizational change (as described earlier in this chapter) but also organizational culture and structure. Working from the assumption that organizations are culture (Smircich, 2017), I viewed data analysis as a process of uncovering organizational culture. I adopted the following perspective:

Everything that can be observed in the organization may be interpreted as an expression of specific underlying convictions and values. This is true of verbal utterances, interpersonal interactions and artefacts, such as the technology used in the organization, the architecture of the headquarters, or the porters’ uniforms. In every case it may be asked what these mean as a symbol of the underlying cultural values (von Rosenstiel, 2004, p. 131).

In addressing the first research question, I used a process of longitudinal tracing (Maitlis & Lawrence, 2007) in order to describe the elements of a network’s IGI and their characteristics over time. Then, as described in Chapter Three, I aggregated this information in order to place each network’s IGI on the continua formed by the four dimensions of alignment, specificity, power, and educativeness. This then allowed me to then make inferences about implicit conceptions of teacher knowledge, authority, and autonomy. Using a cultural approach to look at the underlying symbolic meaning of each organization’s material artifacts and what was said about them enabled me to make the inferential leap from the materials to the organization’s beliefs, convictions, and values around teachers and teaching.

Organizations are not only cultures but also structures. Organizational culture is intertwined with organizational structure; further, structure and culture are mutually reinforcing
(Quicke, 2000). Therefore, attention to both is warranted. Analysis of organizations should attend to the exercise of power within organizations and to resistance (Clegg, 1989). Attention to structures (particularly routines for instructional oversight) helped me to uncover power relations. Analysis of the division of labor within an organization is another important element of this approach, as is attention to disciplinary practices and obedience (Clegg, 1989). By focusing on the division of labor, particularly labor related to instructional planning, I was able to draw inferences about conceptions of teacher knowledge, authority, and autonomy operating within each network.

It is important to note that due to constraints of capacity and access, I did not gather data about the ways teachers across each network supplemented, adapted, or resisted the IGI coming from their network’s office. Specifically, I looked at how the networks framed the role of teaching. I could not speak to how teachers experience or enact those roles as they exercised their agency.53 Since the research questions focused on how the networks’ IGIs and staff sensemaking reflected implicit logics of teacher professionalism, a network-level approach to data collection was appropriate for answering them.

Coding

All interviews were transcribed. After importing transcriptions, observation notes, and collected documents into NVivo 12, I engaged in a systematic, iterative coding process (J. Corbin & Strauss, 2008; Miles & Huberman, 1994). In my first round of coding, I used descriptive and process codes (Saldaña, 2015) to establish a clear picture of curriculum implementation on the ground at each network, giving careful attention to curricular characteristics. These codes were aligned to the components listed in Table 3.1. In later cycles, I

53 As I discuss more in Chapter Eight, this is an important area for future research.
deductively used *a priori* codes related to the constructs of my theoretical framework, as well as inductively added codes for emerging patterns (Onwuegbuzie & Combs, 2015; Saldaña, 2015). This abductive process reflected the “dialectic between inductive and deductive reasoning” inherent in qualitative research (Luttrell, 2010b, p. 1). In these later cycles, I coded instances of sensemaking involving: rationales for developing instructional materials; reasons behind design choices or selection of resources; and accounts of implementation choices. Approaches to teacher training, perceptions of teachers, assessments of teachers’ working conditions, and organizations’ future plans for curricula were also of particular interest.

**Emergent Codes.** Emergent codes focused on informants’ perceptions of teachers’ competence, expertise, or knowledge; receptivity to codified or prescriptive curricular resources; and beliefs about the quality of network-provided instructional resources. I also began tracking instances in the data that spoke to the perceived legitimacy of the IGI and level of teacher backing behind its various elements by applying a “buy-in” code. Attention to legitimacy is essential to understanding how power operates (Clegg, 1989). Perceived legitimacy contributes to policy buy-in, which is a major factor in implementation fidelity (Desimone, 2002; Louis & Smith, 1991). In my coding, I looked for instances of networks using strategies for increasing the perceived legitimacy of their IGIs among teachers, including demonstrating efficacy, developing IGI elements with teacher input, soliciting feedback, and structuring opportunities for sensemaking. Finally, I also developed a set of emergent codes related to the concept of semi-professionalism.

As part of the process of data reduction (Li et al., 2000), the research team created contact summary forms (Miles, Huberman, & Saldaña, 2013) for every interview and observation. Using contact summaries and codes to aggregate accounts of interactions in the
field, the research team wrote within-case analytic memos (J. Corbin & Strauss, 2008) and built cross-case analytic matrices (Miles & Huberman, 1994) during Phase One. Building on previously-written analytic memos and matrices, I conducted additional within-case (i.e., vertical), cross-case (i.e., horizontal), and longitudinal (i.e., transversal) analyses (Bartlett & Vavrus, 2017; Maitlis & Lawrence, 2007; Onwuegbuzie & Combs, 2015).

**Document Analysis.** The interview transcripts and field observations were the primary sources of data, but additional analysis of artifacts allowed me to support and refine emerging findings (Stigliani & Ravasi, 2012). As described above, these artifacts consisted of documents such as slide decks, curriculum samples, handouts, meeting agendas, strategic plans, and organizational charts. Digital artifacts included school websites and curriculum samples.

All material artifacts contain multiple levels of meaning; thus, researchers can infer the ideas and values that informed a document’s creation from analysis of its structure and contents (Hodder, 1994). As situated, “collective social products” (Prior, 2003, p. 26), curricular materials produced, purchased, or recommended by networks reflected their expectations for teacher performance. Namely, the design of instructional materials implied certain teacher activities (Carlgren & Klette, 2008). Restructuring them leads to a redefining of teachers’ role (Klette, 2002). As I scanned curricular documents for types of scripting (outlined in Table 3.5), I sought clues regarding a school improvement network’s implicit conception of teachers’ occupational role. In addition, I considered how the documents framed the central tasks of teaching and the competencies needed to complete those tasks (Carlgren & Klette, 2008). Then, I triangulated those clues against my analysis the characteristics of other areas of the IGI, as well analysis of sensemaking in interview and observation data.
Validity

Validity,\(^\text{54}\) which concerns the grounding and justifiability of claims, is also an essential concern in qualitative research design (Luttrell, 2010a; Maxwell, 2012). Some scholars have questioned the validity of qualitative case studies (e.g., Scandura & Williams, 2000), so it is important for qualitative researchers to clearly demonstrate that their data provide sufficient evidence to justify their inferences and that their findings speak to the general phenomenon under study (Lee & Lee, 1999). It is important that constructive strategies for maximizing validity be built into all phases of a research project, not reserved as post hoc measures solely for use in the final stages (Morse et al., 2002). In this dissertation, I intentionally considered these matters throughout the research process, starting in the design phase. In the following sections, I describe aspects of the research methodology (in addition to those already mentioned) designed to ensure that my reported findings aligned with the realities at each case organization.

A threat to validity is a “way you might be wrong” (Maxwell, 2010, p. 280). Verification strategies, or techniques for addressing threats to validity, include the following: prolonged engagement in the field, collaboration, rich and thick data, data triangulation, analysis of disconfirming evidence, reflexivity, creating an audit trail, peer debriefing, and member checks (Creswell & Miller, 2000; Onwuegbuzie & Leech, 2007). In a previous section, I outlined my prolonged engagement in the field and collaboration during Phase One data collection. I also addressed methodological triangulation, data adequacy, and saturation. In the paragraphs below, I describe additional strategies I used to enhance the validity of my findings.

\(^{54}\) I intentionally use the term “validity.” Some qualitative methodologists have argued for using a separate set of terms (e.g., “authenticity”) or against the concept altogether (e.g., Guba & Lincoln, 1989; Wolcott, 1990). Like Morse and colleagues (2002), I worry that “introducing parallel terminology and criteria marginalizes qualitative inquiry from mainstream science and scientific legitimacy” (p.16). For this reason, I adopt the language of Maxwell (1992, 2010).
Data Triangulation and Analysis of Disconfirming Evidence

While coding, I ensured that each finding emerged from a sufficient evidence trail (Maitlis & Lawrence, 2007). I also checked that findings were fully triangulated by seeking corroboration and convergence in themes across multiple informants, points in time, and/or sources of data (D. T. Campbell & Fiske, 1959; Creswell & Miller, 2000; Onwuegbuzie & Leech, 2007; Yin, 2009). This process increased my confidence in the validity of emerging theory (Jick, 1979). The criteria for a sufficient evidence trail varied based on the generalization I was making. For example, a finding about the network as an organization required corroboration across more than three informants representing at least two levels of the organization and substantiation in documentary evidence. In contrast, a claim about a minority opinion in a team of ten people might rely on two to three informants alone. A shared opinion across that shared team might be represented in at least five to six of eight interviews.

I also incorporated codes for disconfirming (or countervailing) evidence into my codebook (Creswell & Miller, 2000; Miles & Huberman, 1994; Onwuegbuzie & Leech, 2007). Thus, data triangulation also helped me to identify salient points of divergence in the data. This divergence presented an opportunity for enriching my account (Jick, 1979) of the logics of professionalism operating at Metro and Denizen. Attending to this “untidiness” in the mixture of stakeholder perspectives and comparing this contestation with tangible organizational actions helped me to uncover the power relations driving change (Pettigrew, 1990). By including

55 The emergent codes for semi-professionalism are an example of this. Another example is the ranges of codes used to capture variation along the dimensions of alignment, specificity, power, and alignment (described in Chapter Three).
divergent data in my findings, I highlighted the multifaceted nature of organizations and lifted the voices of dissenting stakeholders (Buchanan & Dawson, 2007)

**Reflexivity**

A distinct characteristic of qualitative research is that “the researcher is the primary instrument for data collection and analysis” (Merriam, 2002, p. 5), thus bringing the inherent subjectivity of the researcher’s perspective into data collection and interpretation. In order to guard against having my perspective compromise the validity of my claims, I practiced reflexivity (Leavy, 2017). This constituted a process of examining how my “beliefs, values, and biases” influenced my representation of the data (Creswell & Miller, 2000, p. 127).

During coding, my reflexive stance meant that I paid particular attention to documenting my assumptions and adhering to the data in arriving at my findings (Creswell, 2007; Leavy, 2017). I was mindful that my perspective and values would influence which data captured my attention (Maxwell, 2010). As such, I consciously “bracketed” biases of which I was aware (Creswell & Miller, 2010) and examined my coding decisions in order to prevent myself from only selecting data that fit my preconceptions or hypotheses (Maxwell, 2010; Merriam, 2002; Miles et al., 2013). For example, I was aware that I began the project with a bias against prescriptive instructional guidance. I remained cognizant of this bias and noted how it changed as I encountered the data. I also reviewed my coding to ensure that I had not omitted excerpts that spoke to the potential benefits (to teachers and students) of prescriptive instructional guidance.

Another aspect of my reflexive practice was maintaining awareness of my positionality—aspects of my identity that positioned me as an insider and as an outsider—and how that position influenced the processes of data collection and data analysis. In particular, my status as a
researcher from a prestigious institution positioned me as an outsider during data collection. Further, in all but the elite interviews, staff were aware that someone above them in the organizational hierarchy had agreed to participate in the research. In some cases, informants’ direct supervisors asked them to sit for interviews or to permit observers at professional learning events they planned and facilitated. Although they had the right to decline interviews (and some did), it was possible that some informants would not have participated without pressure from their superiors. This, combined with a context of financial precarity and organizational upheaval at both networks, led me to start each interview by clearly stating that my research was not a program evaluation. I also chose key moments throughout the interviews to forge relationships based on aspects of my identity that had the potential to make me seem like more of an insider. For example, when interviewing women who mentioned their children, I brought up my own role as a mother of young children. I also tried to explicitly empathize with respondents where appropriate, identifying myself as a former teacher and sharing aspects of teaching that I found challenging. I hoped that these strategies helped informants feel more at ease during interviews, improving the quality of my data.

Creating an Audit Trail

My colleagues and I also worked to create an audit trail (Creswell & Miller, 2000) that could be followed by another researcher. As described earlier, we created detailed records of every contact in the field that included the date, location, persons involved, and a summary of data gathered. We also wrote case description memos and created cross-case analytic matrices. I kept a detailed codebook and saved a new copy after every revision. I also used the annotation feature in NVivo12 to record my thinking and questions during coding.
Peer Debriefing

After drafting my findings, I used two post hoc verification strategies in order to enhance the validity of my writing: member checks and peer debriefing. Peer debriefing (also called analytic triangulation) involves reviewing data and claims emerging from its analysis with a trusted peer or mentor who is external to the study yet is familiar with the research process and the phenomenon under investigation (Creswell & Miller, 2002; Nguyen, 2008). In my case, my advisor, second reader, and peers who have recently graduated from the sociology and education program at Teachers College helped me debrief through conversations and feedback on chapter drafts. In addition, I presented early findings at the NAEd/Spencer Dissertation Fellows retreat in March 2019, at the April 2019 annual meeting of American Educational Research Association, and as a job talk in June 2019.

Member Checks

Member checking is a strategy for “taking data and interpretations back to the participants in the study so that they can confirm the credibility of the information and narrative account” (Creswell & Miller, 2000, p. 127). This practice enhances the descriptive validity (i.e., factual accuracy) of the research (Maxwell, 1992; Pettigrew, 1990). Sharing research findings with host organizations prior to publication is also an ethical matter (Pettigrew, 1990).56

Ethics Statement

Throughout my research, I adhered to established ethical standards (American Association for Public Opinion Research, 2015; American Sociological Association, 2018) for

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56 I intended to share my findings with stakeholders at Denizen and Metro prior to defending and depositing the dissertation, but I decided against it due to time constraints and a desire to respect the time of informants as they supported schools during the global pandemic of Spring 2020. I plan to share a summary of results with stakeholders prior to submitting any journal articles emerging from this dissertation for peer review.
the practice of social research. Further, I obtained approval for the research from the Institutional Review Board (IRB) at Teachers College, Columbia University.

During data collection, I obtained informed consent from all informants in order to ensure that everyone was a willing participant. I transparently described the purpose of the study to all participants, making clear that this was dissertation research designed to make an independent intellectual contribution to the sociologies of teaching and curriculum and that I did not conduct this study on behalf of any private agency or governmental agency. With IRB approval, I masked the title of the dissertation in all subject-facing materials in order to conceal my focus on prescriptive instructional guidance. The informed consent document contained enough detail for potential subjects to make an informed decision about participation. Also, I stressed the right to discontinue participation at any time in all of my face-to-face interaction with informants. I clearly stated the risks and benefits, which were minimal.

During data analysis, I took precautions to ensure confidentiality for all participants, using pseudonyms for networks and schools. I stored all documents, transcripts, and quantitative data on a password protected computer, backed up using password-protected iCloud storage and an external hard drive.

Chapter Four Conclusion

In this chapter, I have outlined the research design and analytical methods employed in this dissertation. In summary, the project was an in-depth comparative case study that relied primarily on qualitative data from semi-structured interviews and field observations. In the next chapter, I describe the IGIs at Denizen and Metro.
CHAPTER FIVE: Comparing Instructional Guidance Infrastructures

This chapter addresses my first research question, which was a descriptive question asking about the characteristics of the IGIs at Denizen CMO and Metropolitan Schools. The descriptive evidence presented in this chapter lays the foundation for the analytical work of subsequent chapters. Detailed descriptions of organizational work, such as this chapter, can highlight the micro-foundations of knowledge creation (e.g., the creation of instructional guidance) in concrete, quotidian practices and the phenomenology of sensemaking (Patriotta, 2003).

First, to the extent possible while preserving anonymity, I use thick description (Denzin, 2001) to outline the components of the IGIs at each network and summarize their characteristics. Where appropriate, I include instances of sensemaking that offer insight into the design process. Then, I discuss the similarities and differences among the two IGIs. Prior to the conclusion of the chapter, I include emergent findings about commonalities in the rationales for IGI development at each network.

IGI Descriptions

At Denizen and Metro, hub staff have spent the last several years (i.e., the period of data collection—January 2016 to August 2019) developing more detailed instructional guidance for their schools and teachers. At both networks, in some subject areas and grade levels, this guidance included writing and implementing new curricular materials for teachers. It also included purchasing commercially-produced curricular materials in other subject areas and grade levels. Both networks aligned their instructional guidance to a policy “exostructure” comprised

57 Appropriate instances were informative but did not closely speak to issues addressed in Chapters Six and Seven.

58 These commonalities make the descriptions of this chapter more robust and help contextualize the findings of later chapters.
of learning standards, standardized assessments, accountability regimes, and public funding (D. K. Cohen & Mehta, 2017). As a result, some of this exostructure inevitably became part of the networks’ IGIs. For all of Metro’s schools and Denizen’s NYC-based schools, this exostructure was fairly similar, with slight differences in accountability structures. Both groups of schools used the Common Core Learning Standards and the Next Generation Science Standards to guide their curriculum writing and purchasing. In addition, state standardized assessments were a primary driver of professional learning topics at each network.59

Despite these similarities in aims and the overlap in their use of guiding regulatory frameworks, the networks pursued differing visions of instruction within their IGIs. This was most evident in variation in the structure of their network-developed instructional plans, their selection of external curricular programs, and their design of professional learning activities. In this section, for each of the five elements (i.e., instructional frameworks, instructional materials, assessments, instructional oversight, and professional learning) of each network’s IGI, I describe the key materials, structures, and routines, paying particular attention to instructional materials and professional learning. This sets the stage for deeper comparative analysis of the dimensions of the IGIs and discussion later in the dissertation. In this section, each description represents the state of the IGI at the close of data collection. Where notable, however, I provide a summary recent changes in elements of the IGI.

59 This was true of Denizen’s schools in other states as well, although the assessment themselves were different.
**Description of Denizen’s IGI**

There were multiple motivations driving the development of infrastructure at Denizen. First, network staff saw developing a more robust IGI as a way to realize their shared commitment to teacher support. For example, one curriculum specialist said:

Schools need to know that we’re here for them, and they need to believe that even though we’re not in the rooms with them and the students every day, and they don’t see us in their hallways every single day, that we are here, and that we exist to make sure that their lives are easier.

Colleagues of this person also described their mission as ensuring that teachers had comprehensive, timely, high-quality instructional materials coupled with implementation support.

Second, the IGI was a vehicle for the network to reach its goals for students. In the case of Denizen, its mission was to prepare students for enrollment and success in a four-year college or university, as well as to educate them for lives of “active citizenship.” In recruitment, Denizen targeted “kids who traditionally [have not been] served well by the schools that exist in their neighborhoods” in order to “give them better options.” Unlike Metro, which included career readiness in its mission, Denizen focused on college admissions, with staff noting that “so few” of the young people in the communities they served went to college.

**Instructional Frameworks.** Denizen’s IGI was largely oriented around the instructional framework of the Common Core Learning Standards (CCLS). Multiple members of the curriculum development team reported that these standards informed their work. For example, one said: “Any lesson that I am producing is always aligned with the Common Core expectations.” Another reported that their team had worked hard to adapt “the types of
questioning” in their lesson plans to align with the Common Core state exams. In science, the Next Generation Science Standards and the 5E’s instructional framework (Bybee et al., 2006) served as guiding structures for writing unit and lesson plans.

Although New York State first adopted the Common Core Learning Standards during the 2011-2012 school year, the Common Core aligned state tests were not rolled out until the spring of 2013 (Felton, 2015, October 2). During data collection, which started a full three years later, Denizen’s network leaders described how they were continuing their adaptation to the “increased expectations” of the Common Core. Their areas of focus included “heavier emphasis on discussion and more depth rather than breadth” in literacy and stronger “conceptual understanding in math.” One curriculum specialist reported that teachers were still learning to strike “a balance between actually teaching the content, like science or history, but then also giving [students] opportunities to write about content,” something heavily stressed by the Common Core. Despite interest in going deeper in literacy, at least one person had reservations about the efficacy of content learning through writing and about losing breadth in content coverage as a result.

Adapting to the Common Core was an ongoing struggle because: “It's just hard to teach a lot of stuff deeply.” In the case of mathematics, curriculum specialists felt that the “standards [were] often too narrow.” Staff said that learning goals related to course content often required students to have a lot of prerequisite knowledge about multiple standards in addition to the standard targeted by a given lesson. Therefore, they made a conscious choice to make the connection between math lessons and the Common Core a bit looser than in other subject areas.

In addition to these curricular frameworks, Denizen incorporated pedagogical guidance from Doug Lemov’s (2015) Teach Like a Champion and goals around school culture from Ron
Berger’s (2003) *An Ethic of Excellence* into their IGI, particularly in the area of professional development.

**Recent Changes in Instructional Frameworks.** There were no notable changes to the instructional frameworks in Denizen’s IGI during the period of data collection.

**Instructional Materials.** Although there was relative stability in the instructional frameworks within Denizen’s IGI, materials were often in flux. Of the five elements of the IGI (i.e., instructional frameworks, instructional materials, assessments, instructional oversight, and professional learning), this element was the most dynamic. At the start of data collection, one of Denizen’s goals for their instructional materials overall was to improve the horizontal and vertical integration of the curriculum. In order to do this, they were focused on expanding their existing network-developed curriculum in order to “produce a fully vetted, aligned K-12 curricular experience for kids.” The leader of this effort projected a three to five-year timeline for the completion of the project. Thus, during the entire period of data collection, there were ongoing revisions to instructional materials in every core content area and at almost every grade level. Prior to the beginning of this curriculum development project, the network’s provision of instructional materials did not extend much beyond providing unit plans and materials from commercially-produced curriculum packages. Denizen also provided a shared cloud drive for teachers to upload and exchange lesson plans they wrote. Even as the network-written instructional materials became more comprehensive, “All teachers throughout the network [were] supposed to put their plans on to [CLOUD], which is our online database.”

Members of the instructional team described “revising” or “rewriting” curriculum as a process of “vetting” teacher-created lesson plans and then improving or replacing them with original network-developed lesson plans. One staff member described the process:
We compiled everything that teachers had been doing, and we started to sift through to see what was high quality and what we needed to keep and what did we need to revise, so there are like hundreds of units… and I’ve been chipping away at vetting what exists and then rewriting it to better align with the actual common core standards.

The emerging sequence of lesson plans was known as the network’s “lead plans.”

**Recent Changes in Instructional Materials.** In the following sections, I summarize the status and design goals for each core subject area and grade band, presenting a comparison of two periods of time (i.e., Phases One and Two of data collection). At Denizen, the research team collected Phase One data between March 2016 and July 2017 and Phase Two data between May 2019 and August 2019.\(^6\) Summary statements emerge from my synthesis of interview and observation data, as well as a scan of school websites and sample lesson plans. As a whole, these comparisons create a picture of recent changes in Denizen’s IGI.\(^6\)

**English Language Arts (ELA).** In Phase One, Denizen had a fully developed network-written curriculum in English language arts (ELA) for the middle grades. Staff focused revisions on integrating more content knowledge into reading lessons. In Phase Two, these revisions continued, with staff prioritizing the introduction of more immigrant voices, improving alignment to the Common Core, and adding “clearer time stamps” to indicate the intended pacing within each lesson. In general, this reflected a trend across subject areas for the network to prioritize developing the middle school curriculum first. They reported doing this for two

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\(^6\) For several reasons, there was one longer period of data collection at Metro. I discuss this at the start of the section describing their IGI.

\(^6\) Note that analysis of changes in terms of the alignment, specificity, power, and educativeness of the IGI comes in Chapter Six.
reasons: 1) most of their schools start in sixth grade; and 2) students in middle grades must take state standardized tests (whereas early elementary students do not).

In the elementary grades, the development of network lead plans for daily use was well underway. In the years prior to the start of data collection, one of the network’s superintendents, then on the curriculum team, had “revamped” the K-5 literacy unit plans to be based on Core Knowledge units of study. The goal of this was for “skills [to] serve the content, instead of random content serving the skills.” During data collection for this dissertation, however, it was unclear how this emphasis on content had been carried forward (or not). Curriculum writers were moving toward a “more scripted” model of instruction that drew material in part from two commercially-produced programs, Ready Common Core Reading and Reading Mastery, which network teachers were already using to some extent. In addition, they were building out writing lessons based on the Calkins workshop model and developing a “home grown novel study” program. During Phase Two, this process had been completed for Grade 3 through Grade 5 (prioritized because of state testing), and work on the K-2 writing curriculum was the priority. The network provided very few instructional materials to high school ELA teachers. These teachers received common unit plans and shared their own lesson plans and materials on the online platform. There were no reported changes to this approach in Phase Two. Table 5.1 summarizes the network’s development of its instructional materials in ELA from Phase One to Phase Two.
Table 5.1

Summary of Recent Changes in ELA Instructional Materials at Denizen

<table>
<thead>
<tr>
<th>Grades</th>
<th>Phase One</th>
<th>Phase Two</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Status</td>
<td>Design Goals</td>
</tr>
<tr>
<td>Elementary</td>
<td>Unit plans based on Core Knowledge and Ready Reading; Network-written curriculum in development</td>
<td>More scripted lessons, developing lessons for writing workshop and novel study</td>
</tr>
<tr>
<td>Middle</td>
<td>Fully developed network-written curriculum</td>
<td>Incorporating more content knowledge into reading lessons</td>
</tr>
<tr>
<td>High</td>
<td>Network-created unit plans</td>
<td>None</td>
</tr>
</tbody>
</table>

Mathematics. In mathematics, Denizen’s approach to the provision of instructional materials followed a similar pattern. In Phase One, the elementary grades used an externally-developed, publicly available program, EngageNY (also known as Eureka Math); the middle schools used a network-developed curriculum; and the high schools largely developed their own materials. There were no plans to change the math materials given to elementary schools. As of Phase Two, Denizen’s elementary schools were still using Engage.

Staff expressed a belief that the more conceptual approach of EngageNY could work if started in Kindergarten, but they had concerns about using it with sixth grade students entering
Denizen’s schools for the first time, as these students tended to start out performing significantly below grade level expectations. One staff member characterized the Engage curriculum as having a high level of rigor but limited support:

It assumes that you learned what you were supposed to learn when you were supposed to learn it, and you learned it completely. And we’re not reviewing it; and we’re not talking about it; and the expectation is you should be able to just go.

For this reason, although Denizen had developed their middle school lesson materials based largely on Engage, they had plans for significant revisions. Math curriculum designers also drew from units written by the Math Design Collaborative at the Bill & Melinda Gates Foundation in their lesson plan development.

Coming out of Phase One, their goals included changing the structure of math courses to combine what had previously been two separate periods of math instruction (one conceptual and one applied) into one team-taught block. In addition, the team wanted to improve the alignment of the lesson materials to the Common Core, stating that Engage was “not really Common Core math” and that its developers had “changed the pictures” and “used different language” without really integrating the standards. Finally, the team hoped to increase the degree of spiraling (i.e., revisiting previously taught concepts and skills) in the sequence of lessons (in response to the perception of limited support described above). In Phase Two, the team had completed this process, including a reduction in the level of scripting, and had no immediate plans for additional changes.

62 I will discuss this in greater depth in Chapter Six.
As of Phase One, Denizen provided its high school algebra and geometry teachers with unit plans and an online space for sharing resources, similar to its approach with ELA teachers. However, they also developed a “resource bank” and “structured notes” for each unit. As of Phase Two, members of the math team had started to develop more specified materials for algebra and geometry. During this process, the lead math specialist reported that they were being “strategic” by “providing certain units or certain lessons or activities” in “the more difficult spots first.” At a professional learning event, a network leader explained the rationale for this project, saying they wanted “to prepare something so that teachers are not creating their own curriculum but have something to build off of.” This process was nearly complete. Table 5.2 contains a summary of the changes to Denizen’s mathematics instructional materials from Phase One to Phase Two.
### Table 5.2

**Summary of Recent changes in Mathematics Instructional Materials at Denizen**

<table>
<thead>
<tr>
<th>Grades</th>
<th>Phase One</th>
<th>Phase Two</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Status</td>
<td>Design Goals</td>
</tr>
<tr>
<td><strong>Elementary</strong></td>
<td>EngageNY</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Fully developed network-written curriculum based in part on EngageNY</td>
<td>Changing course structure, improving standards alignment, and increase spiraling</td>
</tr>
<tr>
<td><strong>Middle</strong></td>
<td>Network-created unit plans in Algebra and Geometry, upper level math teacher sharing resources using shared online platform</td>
<td>Developing more specified materials for Algebra and Geometry</td>
</tr>
<tr>
<td><strong>High</strong></td>
<td>Teachers of higher-level mathematics courses did not receive unit plans, and the networks goals for writing instructional materials did not extend to these courses. This approach did not change during data collection.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Science and Social Studies. During Phase One of data collection, Denizen’s elementary curricula for science and social studies were “predominantly textbook.” In science, Denizen provided teachers with the Pearson Interactive Science program. In social studies, the network gave teachers “curriculum maps” from the Alexandria Plan program, but teachers were responsible for developing their daily lesson plans. The primary goal for each subject was to</td>
<td></td>
</tr>
</tbody>
</table>
move toward a fully-developed network-written curriculum that was more aligned to the
practices of scientists and historians. In the interim between Phase One and Phase Two, the
network produced a curriculum for science and social studies by compiling commercial
programs with teacher-created materials on the shared drive. A staff member described this as
“in-house because it's vetted by the curriculum team” but not “as fleshed out and scripted” as the
next iteration of materials.

In Phase Two, the production of this iteration of materials was ongoing. The person
leading the project described a “hands-on” vision for instruction and said: “We are really trying
to get rid of any textbook for real authentic primary and secondary source readings.” They
described the revised materials they had produced as “cohesive” and “completely new.” At the
close of data collection, about 40% of units had been completed.

In middle school science, there was a fully-developed network-written curriculum in
place as of Phase One. Its standardized daily lessons, based on the 5E instructional model,
included labs and opportunities for practice with content-area writing and non-fiction reading. Its
creator described a commitment to student-driven inquiry and constructivism as guiding
principles in their design choice. As of Phase Two, there were no reported changes to this
curriculum nor stated goals for its revision. Its creator had been promoted to leadership of the
instructional team.

In contrast, the high school science curriculum was still under construction. In Phase
One, there were network-created unit plans in place, but little else. Staff were beginning the
process of developing daily lesson plans for Living Environment (i.e., ninth grade biology in
New York State) and chemistry. As of Phase Two, the Living Environment curriculum was
finished and chemistry was in progress. The curriculum designer reported drawing in part on the
science curricula produced by Novel (another affinity partner). There were still no network lead plans for physics or for the various AP science classes across Denizen’s high schools. Network staff reported that these teachers drew on a host of available sources, especially materials produced by The College Board. Goals for the ongoing development of high school science materials included incorporating explicit connections to students’ lives in order to “show” them the “relevance” of science to the real world, as well as increasing the level of “rigor.” Table 5.3 below displays a summary of changes in Denizen’s instructional materials in science from Phase One to Phase Two.

**Table 5.3**

*Summary of Recent Changes in Science Instructional Materials at Denizen*

<table>
<thead>
<tr>
<th>Grades</th>
<th>Phase One</th>
<th>Phase Two</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Status</td>
<td>Design Goals</td>
</tr>
<tr>
<td>Elementary</td>
<td>Pearson Interactive Science</td>
<td>Network-written curriculum in development</td>
</tr>
<tr>
<td>Middle</td>
<td>Fully developed network-written curriculum</td>
<td>None</td>
</tr>
<tr>
<td>High</td>
<td>Network-created unit plans</td>
<td>Developing lead plans for biology and chemistry</td>
</tr>
</tbody>
</table>

In middle school social studies, there was a fully developed network-written curriculum in place during Phase One, and the network had plans to revise it in order to “boost the level of rigor.” In high school, the network had not provided instructional materials, and teachers were
sharing their own resources. In spring 2017, Denizen hired a social studies specialist to write high school curricular materials, which “meant in practicality… creating from scratch ninth and 10th grade Global History curriculum that didn't exist before to support for the transition to the new\textsuperscript{63} Regents exam.” In Phase Two, this curriculum development work was well underway. The specialist summarized their design approach: “History should be dope, D-O-P-E. You should dig into sources. There should be opportunities for discussion. There should be purposeful skill vetting. There should be explicit framing.” Toward this end, the history specialist had revised the middle school materials to include more inquiry and created daily lead plans for ninth and 10th grade history that included carefully selected primary source materials. However, when data collection ended, there were no plans for continuing this work. Table 5.4 displays a summary of changes in social studies instructional materials at Denizen over the course of the study.

\textsuperscript{63} At the time of this interview, New York State was phasing in its revised Global History I and II Regents exams developed to align with the state’s new K-12 social studies framework. I did not mention this framework earlier because although the curriculum team mentioned the new exam, they did not mention the new framework. Of course, they may have used it during the design process.
Table 5.4

Summary of Recent Changes in Social Studies Instructional Materials at Denizen

<table>
<thead>
<tr>
<th>Grades</th>
<th>Phase One</th>
<th>Phase Two</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Status</strong></td>
<td><strong>Design Goals</strong></td>
</tr>
<tr>
<td>Elementary</td>
<td>Alexandria Plan curriculum maps, Teacher-created lesson lessons</td>
<td>Network-written curriculum in development</td>
</tr>
<tr>
<td>Middle</td>
<td>Fully developed network-written curriculum</td>
<td>Increase rigor, and shift to an inquiry model</td>
</tr>
<tr>
<td>High</td>
<td>Teachers using and sharing unit and lesson plans, but no resources beyond that</td>
<td>Write lesson plans, integrate carefully selected primary sources</td>
</tr>
</tbody>
</table>

Assessment. In the area of assessment, at the network level, Denizen’s IGI included some formative strategies but consisted largely of summative exams and state tests. There were two examples of potential formative assessments created by the network. First, in their lead plans, curriculum specialists in math and social studies included a “do now” at the start of each lesson and an exit ticket at the end. Second, schools used standardized tools for tracking reading

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64 For the purposes of this analysis, I used the distinction between formative and summative assessment outlined by Harlen (2011). Formative assessments are low-stakes, frequent assessments of the learning process that gather information about student learning needs that teachers use to adjust instruction. Often, formative assessments engage students in self-assessment and reflection. Summative assessments, in contrast, occur at longer intervals to determine what students know after an instructional segment. Examples of summative assessment include end of unit tests, interim assessments, and state standardized tests.

65 This is not to say that the same balance prevailed at the classroom level. The nature of formative assessment is such that it is more likely to be prioritized by classroom teachers and less apt to produce data that can be easily aggregated and tracked. A network’s interest in identifying trends across its schools makes it more inclined to emphasize summative forms of assessment.
progress on an ongoing basis: STEP assessments in elementary school and Accelerated Reader in middle school. These structures produced opportunities for formative assessment, but the extent to which teachers used these opportunities or created others is unknown (due to the nature of the data collected).

Network-written, mandatory midterm and trimester exams were among the most prominent methods of summative assessment for Denizen schools. These were administered across schools according to a schedule imposed by Denizen’s central office. Bulletin boards in one network school displayed average scores on major exams across different classes, including midterm and overall class averages, suggesting that the results were important to school leaders.

State standardized testing (including high school exit exams such as the Regents in New York State) also received high priority. This was reflected by the choice (mentioned earlier) to focus curriculum development efforts in testing grades. For example, as one staff member described, the first elementary units revised were those for third through fifth grades, which had “gotten more love than the lower grades just because they are also testing grades.” In addition, preparing students for the new Regents exams, which were “completely different, much more inquiry driven, much more narrative, much more argumentative” was a priority among high school curriculum specialists. Advanced Placement (AP) exams and Measures of Academic Progress (MAP) testing were additional summative assessments included in the IGI.

**Recent Changes in Assessments.** There were relatively few changes to the assessment infrastructure at Denizen during the study. Two notable exceptions were changes to the Regents exams made by New York State and the need to consider the Partnership for Assessment of Readiness for College and Careers (PARCC) assessments when designing instructional materials (as Denizen expanded its network into states using PARCC).
**Instructional Oversight.** Denizen’s IGI included multiple routines for instructional oversight. The most prominent routines were around intellectual preparation of network lead plans, classroom observations, and formal evaluations. First, Denizen required teachers to provide school leaders with evidence that they had “intellectually prepared” for teaching the network’s lead plans. Network staff defined intellectual preparation (IP) as a “daily activity” of preparing “to deliver the instructional part of the lessons.” The goal of supervisory routines for intellectual preparation was ensuring that teachers “authentically engaged with the materials” prior to delivering lessons, but the best mechanism for doing this was elusive.

In Phase One of data collection, a network leader expressed concern about the “heavy” burden that intellectual preparation of the network lead plans placed on teachers and leaders: “It’s a very significant lift.” This was related to the “level of documentation” required:

> Some of the leaders were erring on that side of, “I don't know if you've intellectually prepped unless you write all these things," and the teachers were like, “I can't do that. I'm going crazy,” and then they tried other types of checklists, in which case teachers were basically just printing out the network lesson as is.

The form of this documentation (e.g., “trackers” or “checklists”) varied across schools as leaders tended to have “different requirements for what they want[ed] from their teachers in terms of evidence.” One curriculum specialist gave examples of the contents of these checklists:

> So, when are you going to do your tabletop questions? What questions are you going to focus on? How are you going to get students to give their answers? Is it through volunteering? Is it through cold calling? Is it just through turn and talks? Are you going to show call the student work?
Interestingly, there were also multiple templates at the network level. For example, we observed two different templates being used in professional learning. One was a content-generic list of two columns of questions with space for annotation designed to be used with a single lesson plan. The second was a checklist specific to planning for student feedback during math instruction designed for use with individual lessons and the pacing calendar. The math team’s document also included a self-assessment rubric with more than 25-items. Although the checklist asked teachers to “prioritize topics” and plan “meaningful feedback for expected” questions about content, the rubric was subject-area agnostic (i.e., content-generic). Thus, the network’s scaffolds for intellectual preparation emphasized generic pedagogical moves more than content-specific pedagogy, consistent with the new professionalism.

Toward the end of data collection, a leader at Denizen said their instructional team was working on finding ways to make intellectual preparation a more authentic task. According to three members of the network staff, teachers were doing “intellectual prep” but it felt perfunctory or “box check-y.” One curriculum specialist described the challenge as follows:

Having them produce a whole bunch of evidence is not the goal or not to make all the extra work for them. We want them to be prepared to teach the lesson, so we haven't figured that one out yet.

Overall, there was a lack of clarity about what intellectual preparation involved and what expectations for teachers were. Across network staff, there was consensus that the process needed improvement. It remained “an ongoing conversation,” but there were no specific next steps reported.
A second type of instructional oversight at Denizen involved curriculum specialists from the network hub office visiting classrooms to observe the implementation of the network’s lead plans. This practice had emerged in recent years. As one principal shared:

Having the specialist come and do observations is something relatively new, actually. It used to be completely school-based, and the specialists just sort of planned the lessons and disseminated them. This year we’re really seeing them come do school observations and share their feedback with us.

The frequency of these visits depended on perceived teacher needs. As one curriculum specialist explained, network leaders directed them to differentiate:

If a teacher is at the advanced level, you should observe them at least once every two weeks. If a teacher is at a developing level, they should be observed weekly with some opportunities for real-time feedback. So, they definitely gave us an outline of what it could look like, um, but we try to get into every classroom once a week, and for some teachers, it’s more often, if they need more support.

Members of the instructional team tracked their visits to a teacher in an online system in order to coordinate with school leaders. Formal evaluations (described below) determined teachers’ ratings (i.e., emerging, developing, advanced, or master).

These two oversight routines (i.e., intellectual prep and curriculum specialist visits) were specific to the network-created lesson plans. Additional oversight routines, including formal teacher evaluations, within-school coaching, leader check-ins, and school reviews, were broader in scope and in some cases, more evaluative. Anyone who observed a teacher entered the “date of the observation and the feedback given” into a tracker. Scoring included a qualitative rubric with three sections (i.e., team-oriented behaviors, student culture and discipline, and teaching
and learning) and a quantitative growth score based on student data from summative assessments. The qualitative portion, which combined teacher self-ratings with leader ratings, accounted for 60% of the teacher rating, and the growth score counted for 40%. A high-level network leader tried to explain the calculation of this score:

So, they get their [trimester] scores, it’s all built in… we have this calculator built in so teachers can figure out what their raise might be because they all want to know that because this is contingent on their raise. So, there’s that piece, and then we use the quantitative metrics, which we’ve done a lot of work to evolve over time, and they’re different depending on the kind of teacher you are, but we’re looking at growth and proficiency in different ways and holding them accountable with different weights. And so, we’ve built this out, so this becomes 40% of their overall score, and that triggers a number that gives me their raise. We have this decile metric, which was super complicated but actually accounts for if I’m a teacher and I have ten IEP kids who’ve been retained two times, and are also ELLs, or whatever it is, each kid gets a number, depending on how at-risk they are? And what did you actually do for that kid? So, if I got that kid over the 70% line, I get ten points for that kid, versus a kid who came in strong, I get one… So, we’ve built that out to honor the fact that obviously we have kids coming in at different places.

The opaque complexity of the quantitative metric combined with high stakes (e.g., the size of teachers’ annual raises) were consistent with the new professionalism, as was the frequency of other forms of oversight. (All teachers had at least 30 observations per year, and struggling teachers had more.)

Within-school observations and coaching involved considerable use of video. Staff members at Denizen touted the benefits of using video when providing observation feedback to teachers or eliciting teachers’ self-reflection. Observers (who included principals, assistant principals, and coaches) used an online platform to annotate videos with feedback, “re-script” what a teacher had said (providing alternate phrasing), or ask questions. Then, observers would share the video with the teacher observed. One school leader described their perception of the value of using video in teacher observations:
I can't speak enough to watching video of teachers. It's just so different than me saying like, “Oh, you are not giving clear directions.” They are like, “Cool”—They believe me, but they are like, “It felt clear to me.” So, then being able to re-watch that with teachers is really, really valuable.

A curriculum specialist and another school leader agreed that showing teachers showing video of their practice helped them see what observers saw. For example, the second school leader described a video of a teacher leading guided reading:

I'm sure he thinks he's following this paired reading model, but there's kids throwing spitballs. Kid walking across. It's so obvious that nobody in that room is reading, and he really thought that during that seven minutes, students were reading. And even when I showed him the video, in front of his face, he was like, “Yeah, I can see how I was kind of sloppy.”

Although the use of video clearly provided teachers with opportunities for learning, I categorized it under oversight because it involved a relatively intense level of scrutiny compared to professional learning opportunities. In addition, the scrutiny was tied to performance evaluation: observers summarized feedback in the online tracker and saved relevant email. In fact, at a professional learning session for school leaders, high-level network leaders advised school leaders to save all emails related to observations and consult them in advance of scoring.

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66 Videos were also a tool for general professional learning. Denizen also compiled a library of videos illustrating best practice on its internal digital platform. This library included videos of teachers “executing certain tactics, executing certain lessons, systems—like video of a really strong arrival system, or a transition from classroom to classroom, or lunch system, or anything… [with school staff] doing something really well.” These videos were accessible to staff and sometimes shown during “PD for new leaders” or “new teachers.”
the evaluation rubric. For these reasons, I included discussion of observations and coaching in this section.67

In addition to evaluating teachers, the network evaluated each school and leader in a biannual school review. As described by a school leader, this process also involved considerable scrutiny of teacher practice:

A big team of people from the network as well as other principals come in and spend the entire day observing every single teacher often for multiple times. They watch lunch. They do staff interviews, they do student interviews, and then basically put together this report in terms of strengths and weaknesses of the school. Part of that is my leadership presence with both students and staff. So, a lot of it is on the school itself and some of it is specific to my leadership.

Network leaders provided schools with observational rubrics in advance of the review. These informed schools about “the categories that [the network would be] looking at and where the feedback could come from.”

The contents of these rubrics provided insight into the logic of professionalism operating at the network. There were four types of walk-throughs rubrics68 (all of which were scored in each classroom as part of one school review): academic, cultural, data, and physical space. The academic walk-through rubric included space for notes on student engagement, “habits of discussion,” and the ratio of student talk to teacher talk. These were all content neutral, consistent with the emphasis on generic practices under the new professionalism. The culture

67 I discuss the areas of teacher practice emphasized in observations in Chapter Seven.

68 The samples I describe, provided by a network leader, were from the 2015-2016 school year.
asked reviewers to tally the number of positive and negative comments made to students, as well to take notes on engagement and student compliance. In addition, reviewers noted whether teachers were correctly taking “deductions” from students’ [Denizen] dollars and logging the deductions “as appropriate.” This virtual currency was similar to that employed at other no-excuses charter networks (e.g., KIPP). Students received a virtual salary. Various behavioral infractions (e.g., not having a sharpened pencils) translated to specific dollar-amount deductions. The accumulated value of a student’s [Denizen] dollars entitled them to incentives such as class trips. This elaborate accounting system based on performance and enforced through scrutiny was also consistent with the new professionalism. The school review process, which involved complex metrics, accountability, and scrutiny, reflected a degree of symmetry in the accountability systems targeted at students, teachers, and school leaders. In terms of teacher knowledge, the culture rubric emphasized generic pedagogical moves, consistent with the new professionalism. Similarly, the data walk-through involved tallies of “questions asked,” “cold calls,” “boys called on,” and “girls called on.” Although the coordinator of these walk-throughs in one subject area expressed an interest in focusing “more on the content” in upcoming years, this had not yet been incorporated into the generic rubrics.

In advance of the visit, school leaders submitted self-reflections to the review team. Other types of preparation were “cosmetic” and fairly minimal. As one school leader described: “We wanted to make sure that rooms were clean, that bulletin boards looked correct, etc.” These emphases aligned to the points on the physical space walk-through rubric. There were no significant efforts to prepare teachers because “all the work that we’ve done to get to this point has been the prep.” Parallel to the teacher evaluation process, the school review combined the results of the “qualitative” rubrics (described above) included a quantitative portion based on
student test scores. All of these elements appeared to be consistent with descriptions of technical-rational accountability regimes under the new professionalism.

**Recent Changes in Instructional Oversight.** With the exception of intellectual preparation, there was little change in the network’s routines for instructional oversight during collection. The major exception came at the end of data collection, when the network decided to mostly stop producing instructional materials and employ their curriculum specialists as coaches in the field. Their team leader estimated they would move from spending about 20% of their time in schools to about 75%.

**Professional Learning.** Denizen included several different types of professional learning opportunities in its IGI. The most prominent types were “school-based” professional development meetings, which focused on “culture and sort of setting the foundation for what does it mean to work at our school, and very school-specific things, like schedules and posts, and how do you work with your team” and network-led content area PD, like “network-led science PD, network-led math PD, [and] network-led reading PD.” Network leaders also reported frequently sending teachers to external professional learning opportunities, particularly *Teach Like a Champion* workshops.

The goal of network-wide content PD sessions was to “basically set the vision for that particular subject” and to make sure that “teachers [were] getting developed on not just teaching practice, but also on the specific content they’re going to be delivering.” One example of this was virtual “unit talks” for teachers conducted by curriculum specialists. The team leader described these:

Prior to the start of any given unit, the curriculum specialist holds an optional Google Hangout. So, any teacher in any region, let’s say who teaches seventh grade history, at the start of the unit—okay, so we’re going to teach this unit on the American Revolution. Two weeks prior to that unit launching, they’ll have the option to come to a Google
Hangout. All of the teachers are invited, as well as the curriculum specialist, any leaders who want to come are invited, and the curriculum specialist basically walks them through like big picture—here’s what’s coming this unit. Here’s the lessons that might be complicated for kids. Here’s the expectations for the unit test or project that’s coming.

The leader described the network staff as fulfilling a need for content expertise since it was “impossible” for schools’ leaders “to be an expert in every single subject.” In addition to offering the unit talks, the instructional team conducted training with all of Denizen’s new teachers about “how to use” the network’s instructional materials. The way a staff member described this training, however, focused on explaining how the materials were rooted in learning standards, rather than the nuts and bolts of implementation:

It starts off with saying, “Here's a standard, in this case I think it's a third or fourth grade math standard, New York State common core aligned. I want you to write a multiple choice question off of this. Do it by yourself.” Each person does it. “Now, turn and talk to the people at your table and compare yours and say what's the same and what's different.” There's a lot of really different things even though the standard's fairly specific. Now, this is an example from the actual past New York state released test. “How close to any of yours does it look like?” Oh, not at all, because they interpreted it completely differently. So, yes of course we start with the standards and with the content, but knowing how that's interpreted is huge. From there, it goes into ... we talk about the scope and sequence. They have to articulate... how one thing connects to another.

This description suggested that the network leadership wanted to ensure that teachers’ interpretation of a given standard (re)aligned with the state’s interpretation (as expressed on state tests). This alignment was more important than the essential meaning of the standard. Namely, the state’s interpretation was the correct one. In a small way, the network was reinforcing the state’s claim to jurisdiction over scholastic knowledge, ceding authority over the contents of the curriculum.

Staff also devoted considerable time at network-wide professional learning events for teachers to explore summative assessment data. For example, after each trimester exam, teachers would spend an in-service day doing a “data-dive” in which they compared the performance of
their students on the interim assessments to network averages. PL facilitators encouraged them to conduct item analysis and discuss common distractors on items with which students struggled.

**Recent Changes in Professional Learning.** In several instances, it was apparent that the activities in network-led professional learning were not always consistent with stated goals. For example, the network espoused the importance of student-centered learning, but many observed PL sessions had a rigid, facilitator-centered structure. One leader noted a similar dissonance between the propounding of growth mindset and the nature of Denizen’s PL: “We complain that our teachers don’t have a growth mindset, and our professional development doesn’t actually support it, so we really can’t hold them accountable for that.” Another described wanting to create more alignment between the network’s vision for instruction and the style of PL: “In the same way that kids need to get messy with information and come to conclusions and so forth, we need to actually create professional learning that does that [for teachers] as well.” This represented tacit recognition of the power of symmetry between adult opportunities to learn and a school or network’s vision for student learning; such symmetry can contribute to successful enactment of such a vision (Mehta & Fine, 2015).

Throughout data collection, there was evidence that Denizen’s instructional team was responding to problems raised by this inconsistency and reshaping their approach to designing professional learning opportunities. For example, sessions on intellectual prep were an intentional response to concerns that most teachers were simply printing out lessons and teaching them directly as written. A network leader worried that there was very little work being done to personalize or differentiate the materials and hoped that more authentic intellectual preparation would help change that. In another example, network leaders encouraged school leaders to “Common Core-ize” their school-level scope and sequences for teacher professional learning. At
the end of data collection, the leader of the instructional team expressed belief that increased coaching would be a more powerful vehicle for teacher learning than more network-level PL. There was little reported focus among team members on upcoming PL workshops. Most references to the future involved discussion of the shift to a coaching role.

**Description of Metro’s IGI**

Metropolitan Schools also made changes to its IGI through the period of data collection. As at Denizen, its overall IGI design efforts aimed to meet the demands of the Common Core. As one network leader described: “There’s a lot of rigor that’s expected and a lot of different hurdles.” In many of Metro’s approximately 20 schools, this shift in expectations required a change in the approach to instruction. For example, one school principal described moving from a model of “top-down ‘you learn this way’ [and] ‘I teach, you learn,’ because the standard says this” to instruction aligned with “standards asking for inquiry, discussion, and conversation.”

Other shifts in the IGI reflected Metro’s efforts to better serve its mission of closing the opportunity gap. Increasing the emphasis on career and technical education (CTE) was a primary strategy for doing this. As one network leader explained:

[The students] are not career ready; they’re not ready for life, but they know about parallelograms, and they know the Pythagorean theorem. It’s bullshit. You can quote me on that. And, so, it is very central to what we do, getting all of these kids career ready… Our mission is, I decided, is to get everybody into the middle class. And it doesn’t really matter how we do it.

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69 Recall that there were not two distinct phases of data collection at Metro, Novel, the AFSC, and the SOs overseeing Metro and Novel’s schools. The research team, including myself, collected data from these organizations between March 2016 and January 2018. Thus, it was possible to capture change over time, but since there was no significant gap in data collection, I do not engage in strict before and after comparison as I did in my description of Metro’s IGI. The differing timelines reflect patterns in organizational availability and the team’s capacity for data collection rather than any factor relevant to the findings.
This person saw CTE as essential for getting all of Metro’s students into the middle class. At the close of data collection, slightly less than half of Metro’s schools had formalized career and technical education (CTE) pathways, and the network office was working on obtaining state certification for developing CTE programs in many of its other schools. Metro was also opening a new CTE high school with a computer science focus.

Additional changes in its IGI were the direct result of Metro’s position as an affinity partner in the reorganized NYCDOE under Chancellor Carmen Fariña. Although CMOs like Denizen were relatively insulated from changes in the external policy environment, the affinity partners were more vulnerable to changes in political sentiment (and concomitant changes in the terms of contracts). Although the NYCDOE has an Office of Charter Schools, this office typically works with networks it authorizes. Denizen has a different authorizer, and no one in its leadership reported interactions with the NYCDOE on any matter other than teacher certification or building issues related to co-location.

In 2015, NYCDOE transferred supervisory authority over its network schools to re-empowered community school district superintendents (described briefly in Chapter Four) and created the Affinity Field Support Center (AFSC) to offer operational and instructional supports to schools with affinity partners. During data collection, the superintendents’ offices and the AFSC were also providing Metro schools with elements of an instructional guidance infrastructure (Duff et al., 2018). Thus, as shown in Figure 5.1, Metro’s IGI also intersected with the instructional guidance promulgated by the superintendents of the districts in which its schools were located and the AFSC.
For example, the superintendents conducted considerable oversight and hosted summer co-planning sessions for teachers. The AFSC provided professional learning opportunities open to all affinity schools (i.e., schools belonging to Metro’s network, Novel’s network, or one of the four other affinity partners with contracts with the NYCDOE). There were fledgling efforts to coordinate recommendations and services across these entities (Duff et al., 2018). In addition, Metro reached out to Novel and asked it to share part of its IGI with Metro’s science and social studies teachers. Figure 5.1 also shows the supervisory role of the AFSC over Metro and Novel. The relatively insulated position of Denizen (and other CMOs operating in the city) is apparent.

In the following sections, I describe each element of Metro’s IGI and discuss recent changes. In many cases, these descriptions are shorter and less detailed than in the parallel sections about Denizen’s IGI. This is because, in general, Metro had a less intentional approach to the design of its IGI and a different type of authority over its schools (also the result of its
institutional position in the policy landscape). As a result, the IGI created by Metro was less robust than that of Denizen, meaning that it did not provide clear guidance for every element of infrastructure. It was also more fragmented due to the intersection of elements of instructional guidance coming from the SOs and the AFSC—schools received multiple, sometimes conflicting, messages (Hatch, 2002) about what teaching and learning should look like. As I demonstrate later in this dissertation, this fragmentation had important implications for the framing of teachers’ work. In contrast, the relative isolation of Denizen helped buffer it from the environmental pressures that potentially muddled guidance for teachers at Metro.70

**Instructional Frameworks.** Like Denizen, Metro based its instructional guidance in literacy and math around the Common Core Learning Standards (CCLS). In some cases, the “progressions within the standards” served as guidance for differentiation. For example, one Metro teacher described planning for high school by “look[ing] down the standard” to sixth or even second grade and “see[ing] how the standard builds up and try[ing] to see exactly where your students are falling short.” Their colleagues also engaged with the standards in the same fashion, independent of network guidance.

In career and technical education courses, Metro encouraged schools to align the CCLS with the Career Development and Occupational Studies (CDOS) standards, which specify competencies students should acquire through CTE coursework. These include “universal foundation” standards that outline generic skills such as applying “knowledge of technology to identify and solve problems” (New York State Department of Education (NYSED), 2017, p. 16)

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70 Protected niches like this, often fostered by school “subsystems,” can help create the conditions for instructional change (Mehta & Fine, 2019).
and “career major” standards. Staff at Metro worked with school leaders to incorporate these standards into their curricula. Metro also provided CTE programs with relevant industry standards. For example, a cosmetology program might be provided with the standards underlying licensing exams in that field.

In science and social studies, Metro recommended that its high school teachers use Novel’s network-written curricula (described below). Their science materials were designed around the Next Generation Science Standards and the 5E’s instructional model, the same frameworks guiding Denizen’s approach to science. In social studies, the Novel high school curricula (recommended by Metro) drew upon pedagogical guidance for “teaching literacy through history” from the Stanford History Education Group (SHEG). As described by the leader of Novel’s instructional team, this framework focused on concepts like “what does it mean to write like a historian and so really thinking about literacy and the teaching of literacy as a key part in the teaching of history and discipline specific literacy.” An observed professional development session for Novel’s Global History curriculum (attended by some of Metro’s teachers) relied on an essay by Grant Wiggins (2016) entitled “Seven Keys to Effective Feedback” as a framework for training teachers to give better feedback to their students. In middle school social studies, Metro’s schools followed the New York State K-12 Social Studies Framework, as recommended by the NYCDOE, and adopted various instructional materials aligned to these standards.

For example, one “business/ information systems” standard specifies that students should “demonstrate an understanding of business, marketing, and multinational economic concepts, perform business-related mathematical computations, and analyze/interpret business-related numerical information” (NYSED, 2017, p. 20). An example of a “health services” standard asks students to “understand the current health care system and its impact on health careers” (NYSED, 2017, p. 26).

Unlike Denizen, Novel billed its materials as being aligned to the New York State P-12 Science Learning Standards (NYSSLS), which the state developed from the NGSS.

**Recent Changes in Instructional Frameworks.** There were no notable changes in the instructional frameworks within Metro’s IGI during the period of data collection.

**Instructional Materials.** There was wide variety in the degree to which Metro provided its teachers with particular instructional materials. For the most part, Metro avoided directly providing resources. When it did provide materials, it was in pilots with a subset of their schools. School principals voluntarily opted in to participate in these pilots. When it made recommendations about materials (outside of these pilots), Metro did not attach any mandate or monitoring to their use. In addition, the SOs and AFSC recommended some instructional materials to schools in Metro’s network and offered aligned professional development. As a result, there was a wide array of instructional programs in use across the network. This variation was likely even greater than reflected in the data. Since data collection focused primarily on entities at the intermediate level of the NYCDOE system (i.e., Metro’s network hub, Novel’s network hub, SOs overseeing Metro schools, and the AFSC), there were likely instructional programs or materials idiosyncratically adopted by school leaders or school teachers that were not captured by data collection.\(^73\) In addition, the data did not capture teacher resistance and

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\(^73\) Since the research questions were about the IGI promulgated by the networks and sensemaking among their staff, this lack of information did not interfere with the aim of the dissertation, which were to understand the logic of professionalism implicit in the framing of teachers’ work. I was able to identify areas where Metro did not provide
resourcefulness in choosing instructional materials for enactment within the confines of their classroom walls.

**Recent Changes in Instructional Materials.** In the wake of the 2015 reorganization, Metro found itself with reduced authority and fewer fiscal resources (Duff et al., 2018). Although some network stakeholders were interested in curriculum development, Metro instead pursued partnerships with external organizations: “We are really trying to let our partners do their things because we don’t have in-house expertise and that was kind of how we decided to make those strategic partnerships.” This reflected the philosophy of the network’s leaders: “You can’t invent everything, right, and to sort of reinvent the wheel in every single area is not a sustainable methodology, and it doesn’t get to high quality.” Below, I summarize the status of Metro’s IGI with respect to instructional materials for each core content area, taking care to mention recent changes.

**English Language Arts.** In ELA, Metro had a long-standing tradition of not endorsing any particular curriculum, in an effort to avoid being “prescriptive.” Although there were infrastructure efforts in ELA (e.g., in the areas of coaching and assessments, described below), these did not include curriculum purchasing or development. Toward the end of data collection, however, Metro began thinking about ways to “codify” and “spread” high-quality practices across the network’s schools. In addition, using a grant from the National Math and Science Initiative, they began to support their high schools in teaching AP English Language. Network leaders believed it was more effective for boosting college readiness than AP English Literature.
Mathematics. For middle school mathematics, Metro “partnered” with Jump Math, a Canadian program, to provide instructional materials because, as a leader at Metro said, Jump was “demonstrating results.” At the close of data collection, one middle school was piloting the program, and it was unclear whether there was a plan for scaling up. Other middle schools chose math curricula independently of Metro. Many used EngageNY, but others chose alternatives. For example, two middle schools listed off-the-shelf programs on their websites: Connected Math and Big Ideas.

In high school, at the start of data collection, Metro did not provide its math teachers with any particular instructional materials. However, during the 2017-2018 academic year, Metro developed and piloted an unscripted curricular framework for Algebra I. This framework included a scope and sequence of unit plans, as well as a “menu” of suggested lesson plans and accompanying activities. It did not include daily plans in a particular sequence.

Science and Social Studies. For several years, Metro had been inviting high school teachers to use science and social studies curricula developed by Novel, another affinity partner in the city. Metro’s inclusion of these curricula did not change throughout the period of data collection.

Novel’s curricula offered teachers a common scope and sequence for their courses that were aligned to the state’s Regents exams. Within those frameworks, Novel provided a bank of lesson plans, texts, and suggested activities for teachers to use selectively. (It is notable that Metro’s algebra program, developed after several years of sending science and social studies teachers to Novel, used a similar structure.) Prior to developing their curricula, Novel’s strategy for raising instructional quality involved engaging with teacher teams to teach them how to create inquiry-based, interdisciplinary unit plans (using frameworks like Understanding by
Design (Wiggins & McTighe, 2005)). In approximately 2013, Novel shifted away from this model and implemented a new theory of action. One of Novel’s leaders articulated this theory:

Basically, if teachers are using a common scope and sequence that has quality materials, spiraled content, and embedded formative assessment, if they are participating in a community of practice that allows them to be more responsive to student work and if they are analyzing data from both formative and summative assessment and if they are using technology to support their work, then teacher practice and student outcomes will improve.

This theory of action, which posited that grounding professional learning in a shared curriculum will shift teacher practice, aligned with the empirical findings of the emerging literature on instructional guidance infrastructures cited in Chapter One. This literature showed that professional learning aligned to instructional guidance was more likely to shift practice, thereby enhancing implementation fidelity.

In Metro’s middle schools, science and social studies was more ad hoc. With the exception of a Jump Math pilot in one middle school, Metro did not recommend or provide instructional materials. Schools used a wide variety of programs. Table 5.5 below summarizes Metro’s limited provision of instructional materials. Where available, it contains information about what schools were using in the absence of forceful guidance from the network.
Table 5.5

*Instructional Materials in Metro’s IGI*

<table>
<thead>
<tr>
<th></th>
<th>ELA</th>
<th>Mathematics</th>
<th>Science</th>
<th>Social Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle</td>
<td>Nothing recommended or created by the network, schools using a variety of programs including MyON, iReady, Light Sail, and Code X</td>
<td>Jump Math pilot in one school; other schools using a variety of programs, including Connected Math, EngageNY, and Big Ideas</td>
<td>Nothing recommended or created by the network; some schools using NYCDOE science scope and sequence or PBIScience</td>
<td>Nothing recommended or created by the network; many schools using NYCDOE Passports curriculum</td>
</tr>
<tr>
<td>High</td>
<td>Support for AP English Language</td>
<td>Metro Algebra program development and pilot</td>
<td>Novel network-written curricula; Partnership with the New Jersey Center for Teaching and Learning for physics</td>
<td>Novel network-written curricula</td>
</tr>
</tbody>
</table>

The recent changes in instructional materials, most notably the pilot of Jump Math and the development of the algebra curriculum reflected a strategic shift. As a network leader described, Metro was moving toward being more deliberate about curriculum “not in a one-size-fits-all way, but in a more structured way than we have been heretofore.” This process was “a work in progress.” It involved moving away from supports that were “agnostic to program” and “agnostic to curriculum” toward focusing on “on effective practices and demonstrated practices.” This required striking a balance and finding “a sweet spot in the middle” by still “respecting” that “principals have made certain decisions and have a range of approaches.” Striking this balance meant becoming a “consumer” in some areas (i.e., forming external partnerships where capacity was limited).
Overall, Metro’s goal at the close of data collection was to work toward a “curation role.” Recently, some partnerships had ended, and this reflected a shift in Metro’s stance to adopting programs: “I think we’ve taken a shift away from, ‘Yeah, come try it here. You seem really smart’ to like ‘Ok, what’s your evidence of success out there?’” A curation approach meant being more selective about the initiatives Metro would adopt and the partnerships it initiated.

**Assessment.** Overall, there was a stronger emphasis on formative assessment at Metro than there was at Denizen. Many of the professional learning sessions and teacher meetings observed included some analysis of formative assessment data. For example, Novel encouraged teachers using its science and social studies curriculum (some of whom taught at Metro schools) to use Google platform tools to share formative assessment ideas with colleagues. They also modeled ways in which teachers could use Google Forms to collect easily digestible formative assessment data from students. (Improving formative assessment strategies was a focus among curriculum writers at Novel. They were in the process of looking across “different curriculum projects” to look at formative assessment techniques across content areas and think about ways to support teachers with formative assessment.) In another example, a team of teachers at a Metro high school examined student work together after students did an exercise using non-fiction annotation strategies. The teachers used their observations of patterns in student annotations as a springboard for a conversation about their instructional approach.

This being said, summative assessment was still a prominent part of Metro’s IGI. Students at all of its schools took state standardized tests in middle school and Regents exams in high school. As mentioned earlier, Metro’s supports for ELA teachers did not include instructional materials, but it did include the development of a “progress-monitoring process” as a way to “support the instructional work of the school.” This process involved intermittent
administration of the Degrees of Reading Power (DRP) summative, multiple choice assessments. One network described the implementation of these assessments as a way to make sure there was “a support in literacy” that was “not prescriptive, about curriculum.” This was the second instance in the data where an informant referred to guidance around curriculum as “prescriptive” without clarification with respect to the nature of that guidance.

As with other elements of Metro’s IGI, there was a wide variety of assessment practices across Metro’s schools. Metro provided space for leaders to share these practices with one another. For example, at a meeting of their teacher leader professional learning community, Metro paired a teacher from a school with a mastery assessment model with a teacher in a school moving toward mastery assessment so the first teacher could share their knowledge and experience. However, with the exception of the formative assessment work and DRP use described above, Metro did not generally endorse particular assessments or assessment techniques. Creating this space for exchanging practice was more part of Metro’s infrastructure for professional learning than it was assessment infrastructure.

**Recent Changes in Assessment.** The newly-launched algebra program was also an exception to this relatively hands-off approach to assessment and the only notable recent change in assessment in Metro’s IGI. This program included summative interim assessments intended for use at the same time across schools. When algebra teachers from the pilot schools met in their monthly professional learning communities, they discussed the results of these assessments. Agreeing to administer the assessments was part of the “handshake” that Metro made with schools that opted in to their programs:

We will extend a hand to our schools with the offerings are involved… in turn, they have to extend the hand back to us and commit time, resources, and um, sort of, fulling the
intentionality, the thing, the x, that they’re embarking upon.

Schools piloting the algebra program received access to the instructional materials, and in exchange, they agreed to administer the assessments and send teachers to the PLC.

**Instructional Oversight.** Instructional oversight at Metro was quite different than it was at Denizen. In large part, these differences related to Metro’s environmental position. In terms of performance evaluation, NYCDOE superintendents were responsible for the formal evaluation of schools and their leaders’ evaluations (Duff et al., 2018). Metro did participate to some extent, however. They attended one superintendent’s meetings with Metro principals four times a year and engaged in a lot of “off-line, quasi-management” conversations about schools’ goals and support needs. However, the superintendent did not come to Metro’s meetings with its principals or participate in the annual strategic planning meetings Metro conducted with them. This was because Metro wanted their meetings to be “support not supervision,” consist with the organization’s understanding of its mission.

School principals were responsible for evaluating their teachers using Advance, New York City’s teacher development and evaluation system, although they received assistance from the teacher talent team at the relevant SO. At the SO, the Teachers Development Evaluation Coach (TDEC) responsible for some of Metro’s high schools described their role:

My primary role is to norm principals and assistant principals on the Danielson *Framework for Teaching*. So, norming with each other and also calibrating to state ratings. By law, everyone has to be trained once a year, so I do that in small groups. I do it one-on-one. I do it with teams. I do it in a variety of ways. That’s really my primary role, but what ends up happening is I also end up coaching principals to help them give feedback, so we talk a lot about giving effective feedback, high-leverage feedback, how to keep on top of the observation schedule, which is very rigorous now, compared to how it was in the past.

Since the superintendents’ offices were responsible for this, teacher evaluations based on Danielson (2013) were not part of the IGI promulgated by Metro. However, Advance was part of
the school-level IGI facing teachers across Metro’s network. Like Denizen’s teacher evaluations, Advance uses a combination of classroom observations and measures of student performance to assign teachers a rating. Unlike Denizen’s system, teachers and schools have some agency in determining the observation schedule and in selecting measures. In addition, the frequency of the observations required by Advance is considerably less, with low-performing teachers undergoing one formal and four informal observations in one school year (New York City Department of Education, 2019). This presented a stark contrast to Denizen, where low-performing teachers could be observed as often as twice a week.

**Recent Changes in Instructional Oversight.** Prior to the 2015 system reorganization, Metro had a limited role in teacher evaluations. Instructional support staff at Metro had access to the data system used to track principals’ observations of their teachers and would communicate with principals about the evaluation process. After the reorganization, Metro no longer had access. They did, however, try to coordinate their school-level goal setting process with the superintendents and AFSC:

> At the table there’s the superintendent’s team, the Affinity partner and whoever they want to bring, and the Affinity Center. So, we are trying to like—I call it “battling it out” because we all have different opinions about what to pay attention to at a given point in time.

This sometimes put these entities at cross-purposes, but it did foster conversations about avoiding duplicative supports related to school goals. For example, the Affinity superintendent and Metro were both hosting rounds of intervisitation. Metro staff worried this type of duplication was confusing for school leaders, even as the NYCDOE central office started to open large-scale PL opportunities to teachers across the city. Stakeholders at Metro expressed concern
that this added another layer of PL providers. As one leader explained, “Schools are like, “Should I go to my central stuff? Should I go to the borough center stuff? Should I go to the affinity stuff?”” Meetings with personnel from the SOs and AFSC gave Metro an opportunity to discuss this confusion.

Similarly, the role of coaches and coaching in Metro’s IGI had been in flux from year-to-year since the reorganization. Prior to the reorganization, Metro provided professional learning to instructional coaches from the Children First Network offices, but they were not permitted to support the coaches within schools. After the reorganization, Metro no longer trained external coaches. They had their own small coaching staff within their instructional team, but budget cuts related to the reorganization led to a reduction in the size of that team in 2016.

At Novel, there were also changes in the structure of coaching. Early in data collection, an outside grant enabled social studies coaches to support teachers on the ground in schools, but this coaching was only available to teachers at Novel’s network of schools. Staff saw this as a preferable model: “We also feel like so much more support can be given by people that are physically at the school every day rather than twice a month. More progress can be made in a shorter amount of time.” When the grant ended, however, the organization changed its strategy for social studies support (which Metro teachers using the Novel curricula received):

We are working with a larger number of teachers in PDs than we did in the past but we see them less frequently. We are providing them with a greater amount of material support than they ever had before, but we don't know exactly what is happening in classes or in schools themselves. So, we are further away from the teachers and students but they now have more to use.
Budgetary changes forced Metro and Novel to make tradeoffs with respect to making investments in various areas of their IGI. For example, Novel hoped that increased material support would compensate for the reduction in coaching frequency. This illustrates how the external environment and practical concerns (such as funding) influenced infrastructure development. The relative development of guidance across subject areas also reflected this reality. Staff noted that the IGI was more developed in funded areas: “We have the most robust tools [in SUBJECT AREA], because we've had the funding from [GRANTMAKER].” Thus, in addition to pedagogical vision and organizational mission, which most previous literature on infrastructure has emphasized (e.g., Mehta & Fine, 2015), resource constraints were a driving force in IGI design.

Metro’s shift to a more programmatic approach in recent years, which allowed it to better leverage its limited capacity, also showed the role of resources in IGI design decisions. As part of this shift, Metro tied coaching support to participation in particular programmatic initiatives. One network leader described this change to a program-driven model of support using a restaurant metaphor:

We used to say, like as if we were the personal chefs, like what do you want us to cook? What do we have in the house? Ok, you want lasagna? Well, I can go buy some noodles, and if our math team wants to work on formative assessment, OK. I’ll read up on formative assessment, and I’m an educator, so I can do that. And over here, someone wants to work on um, item analysis of the Regents... like, no. Now, all of our schools are doing the same thing. So, the way we’ve been describing it, is like, we have a set menu. You can have chicken. You can have fish. You can have steak. We have a lot of offerings on our menu. But if you want lasagna... we don’t make it.

Metro would no longer send their coaching staff into schools to meet whatever need a school leader expressed. Instead, coaching came at regular, but widely-spaced, intervals for teachers and leaders who adopted particular initiatives. Overall, this new model for support led to less contact
among coaches and teachers at Metro’s schools. In turn, this meant staff at Metro’s hub office had less information about what was happening on the ground in classrooms.

**Professional Learning.** Due to the shift in its model for support, Metro’s approach to professional learning evolved during the course of data collection. One thing that remained constant was its preference for structuring learning in PLCs. Even though Metro’s instructional support staff was a small group, they operated at least a dozen PLCs for a range of stakeholders (e.g., deans, teacher leaders, principals) relating to a number of topics (e.g., leadership, mathematics instruction, CTE certification). Typically, PLCs met once a month for an academic year. Observations across a range of these meetings showed that the interests and needs of attendees often drove the content of meetings. For example, Metro might set aside time for a discussion around problems of practice and provide protocols for structuring conversation. Then, that discussion would center around the concerns of stakeholders. Artifacts from stakeholders’ work would ground that conversation. Metro staff would participate in conversations but not lead them. Overall, these meetings were characterized by time and space for collaborative sensemaking.

As mentioned earlier, professional learning in the content areas at Metro had historically been curriculum-agnostic. For example, PLC supporting middle school math instruction invited teachers from across the network who used a wide variety of instructional materials. The professional development offered by Novel designed to support the use of their network-written curricula for high school science and social studies teachers was an exception. The goal of these sessions was in part to deepen their understanding of the CCLS and increase their buy-in to the common curricular frameworks. They also focused on the nuts and bolts of implementation support. For example, at one session observed, the warm-up activity read:
I am a [History] Curriculum Superstar! I am confident in my abilities to navigate the website and adapt the resources to meet the needs of my students. Line up at the front of the room. If the statement above accurately describes you, move to the front of the line. If the statement above somewhat describes you, stand in the middle of the line. If the statement does not describe you at all, stand at the end of the line.

The rest of this day of professional learning involved training to use the website and discussions about the differentiation of materials.

**Recent Changes in Professional Learning.** The model for Novel’s curriculum trainings had shifted in recent years. Prior to developing their science and social studies curricula, Novel would host huge school-based meetings of over 50 teachers. At these meetings, teachers used an inquiry process to look at “evidence from student work to determine what skills the students had and what they didn't” and design “interventions to meet those needs and then to monitor the effects of those interventions over the course of the year to hopefully see growth.” As the curricula became more developed, this model changed to what Novel called “unit-based PDs,” which were grounded in the network-written materials:

Teachers come together and they will reflect on the successes of the previous unit—which they've all taught using roughly the same materials—talk about the challenges of the previous unit, have some sort of experience as learners—whether that's experiencing the lab or doing mathematics together, or experiencing a differentiated lesson, or talking about how they would convert a resource into a lesson plan.

It was clear from the description of these sessions that Novel expected teachers to use their resources as a starting point for planning rather than implementing the materials without adapting them. Similar to this format, the PLC for Metro’s new algebra program was not
curriculum agnostic. Sessions were grounded in discussion of the instructional materials and examination of data from the shared interim assessments.

Another recent change was the joint hosting of a PLC in collaboration with an instructional coach from the AFSC and the leader of another affinity partner organization in the city. This collaboration represented one effort to counteract potential dissonance caused at the school-level by elements of IGI comings from multiple entities (i.e., SO, AFSC, and affinity partner organization). Overall, changes in professional learning at Metro and Novel aimed to increase the transfer of new skills to daily teaching practice.

**Comparison of Denizen and Metro’s IGIs**

Overall, there were significant differences in the IGIs of Metro and Denizen. Metro drew from a wider range of frameworks for instructional guidance. Notably, network-written curricula were a prominent feature of Denizen’s IGI, but the use and development of such curricula was more limited in scope at Metro. Also, Denizen’s systems for instructional oversight involved heavier scrutiny of instruction than Metro’s, and there was a much wider range of instructional programs in use across Metro’s schools. Metro’s hands-off, opt-in approach to instructional guidance appeared to result from a combination of factors: its position as a support organization in the NYCDOE system; its tradition of so-called “agnostic support” for its plurality of home-grown schools; and recent contraction in its organizational capacity. Table 5.6 below summarizes the elements of IGI of each network at the close of data collection.\(^\text{74}\)

\(^{74}\) More analytic characterization of these two cases comes in Chapters Six and Seven.
### Table 5.6

**IGIs at Denizen and Metro at the Close of Data Collection**

<table>
<thead>
<tr>
<th>IGI Element</th>
<th>Denizen CMO</th>
<th>Metropolitan Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional</td>
<td>Common Core Learning Standards</td>
<td>Common Core Learning Standards</td>
</tr>
<tr>
<td>Frameworks</td>
<td>Next Generation Science Standards</td>
<td>Next Generation Science Standards</td>
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<tr>
<td></td>
<td>5E lesson model</td>
<td>New York State K-12 Social Studies Framework</td>
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<tr>
<td></td>
<td><em>The Ethic of Excellence</em> by Ron Berger</td>
<td>New York State P-12 Science Learning Standards (NYSSLS)</td>
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<tr>
<td></td>
<td><em>Teach Like a Champion</em> by Doug Lemov</td>
<td>Career Development Occupational Standards (CDOS)</td>
</tr>
<tr>
<td></td>
<td>Calkins’ Writing Workshop</td>
<td>5E lesson model</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Danielson Framework</td>
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<td></td>
<td></td>
<td>Stanford History Education Group (SHEG)</td>
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<td></td>
<td></td>
<td>Wiggins’ “Seven Keys to Effective Feedback”</td>
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<tr>
<td></td>
<td></td>
<td><em>The Artisan Teaching Model for Instructional Leadership</em> by Baum and Krulwich</td>
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<tr>
<td></td>
<td></td>
<td><em>Instructional Rounds in Education</em> by City et al.</td>
</tr>
<tr>
<td>Instructional</td>
<td>Network-developed curricula</td>
<td>Network-developed Metro Algebra curriculum</td>
</tr>
<tr>
<td>Materials</td>
<td>Accelerated Reader</td>
<td>Novel-developed curricula</td>
</tr>
<tr>
<td></td>
<td>Ready Reading, iReady</td>
<td>Jump Math</td>
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<tr>
<td></td>
<td>EngageNY (Eureka Math)</td>
<td>EngageNY</td>
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<tr>
<td></td>
<td>Alexandria Plan</td>
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<td></td>
<td>Core Knowledge</td>
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<td></td>
<td>Pearson Interactive Science</td>
<td></td>
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<tr>
<td>Assessments</td>
<td>High school exit exams</td>
<td>High school exit exams</td>
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<td></td>
<td>AP exams</td>
<td>AP exams</td>
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<td></td>
<td>Midterm and Trimester exams</td>
<td>Unit tests</td>
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<td></td>
<td>STEP and MAP testing</td>
<td>Degrees of Reading Power (DRP)</td>
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<tr>
<td></td>
<td>State assessments</td>
<td>CDOS tests</td>
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<tr>
<td></td>
<td>Accelerated Reader</td>
<td>State assessments</td>
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</tbody>
</table>
During the course of the study, each network moved toward providing more instructional materials to teachers than it had in the past. Denizen had spent several years revising existing unit plans and developing highly-specified daily “lead plans” for almost every subject area and grade level across its network. However, several factors led the CMO to change course, adopting a new coaching-based support strategy for Fall 2019. In contrast, Metro had spent years providing tailored, à la carte instructional support to schools without specifying instructional materials. More recently it had started implementing programs, some of which involved specified instructional materials, using a voluntary pilot model. Shifting towards a more structured programmatic approach in late 2018, Metro began gently encouraging its schools to adopt a specific slate of programs from its menu, depending on a school’s perceived needs. Using a combination of empirical academic literature and institutional research reports, Metro identified ninth grade math as a high leverage point for student success and started to write its own algebra program. While the resources in this program were not particularly prescriptive (as will be shown in Chapter Six), they were more specified than the previous instructional supports.
for math, which were curriculum-agnostic coaching and a generic\textsuperscript{75} professional learning community for math teachers. Metro’s new programmatic theory of action and decision to pilot shared instructional materials and interim assessments marked a shift toward more robust instructional guidance at Metro (despite the absence of shared daily lesson plans).

**Institutionalizing Practice**

Although there were marked differences in Denizen and Metro’s IGIs, a similar interest in institutionalizing the knowledge of practice\textsuperscript{76} motivated their infrastructure building activities. Although stakeholders did not use the term “institutionalize,” they expressed a desire to build structures and procedures that would “codify” the knowledge of individuals across their network for the future. The accompanying projects represented the organizations’ effort to translate embrained and embodied knowledge into encoded and embedded knowledge. Embrained and embodied knowledge are located within individuals; while embrained knowledge is explicit, cognitive knowledge of which individuals are consciously aware, embodied knowledge is tacit, action-oriented, and more automatic (Lam, 2000). In contrast, encoded (i.e., codified in information carriers) and embedded (i.e., residing in organizational routines) knowledge are collective (Lam, 2000).

By institutionalizing the knowledge of practice in network-written curricular resources, stakeholders hoped that writing curricula would help buffer instructional quality from frequent staff turnover. As one staff member at Denizen described: “In a lot of our schools there is a high teacher turnover rate, and teachers are essentially reinventing the wheel when it comes to

\textsuperscript{75} This PLC was open to math teachers at multiple grade levels who taught a variety of subjects using an array of curricular programs.

\textsuperscript{76} Comparison of changes over time in the IGIs of Denizen and Metro led to several emergent findings. I share one of these emergent findings, which concerned efforts to institutionalize the knowledge of practice, because it has relevance for discussions of the locus of teacher knowledge in Chapter Seven.
curriculum.” Furthermore, prior to the start of the in-house curriculum design, new teachers coming into the network did not have “a real sense” of how teachers who left the network had taught the same course. The network decided that it needed “to have something in place for new people who come on.” Staff at Metro described a similar concern about institutionalizing organizational knowledge in the face of turnover. For example, one person described how in the past “there wasn't a lot of thinking about… putting systems in place so [Metro] we can continue this work no matter who is here.” Instead of writing highly-specified instructional materials like Denizen, however, Metro responded differently to this concern.

Namely, Metro institutionalized their support practices in its new, more programmatic structure. Historically, Metro has thought of itself as a “Mom and Pop shop” and taken pride in giving individualized support to schools that was largely “driven by the person who was doing the support.” However, as a network leader explained, the expertise of the “person who was doing the support” was lost if that person left the network without “putting systems in place.”

At both Denizen and Metro, writing curriculum was a strategy for institutionalizing the knowledge of practice in organizational artifacts (or information carriers in Lam’s (2000) terms) rather than in personal relationships. This was particularly important for Denizen because of its plans for rapid growth. As staff at Denizen put it, they wanted to move away from “just relying overly on the individual capacity of people here and on the relationships between people.” While the organization wanted to honor its roots of being “invested in each other personally,” the hub leadership also saw the use of standardized curriculum as “realistic” given Denizen’s expansion.

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77 A prominent network leader used this term.

78 The network also slowed its plans for expansion over the course of the study. In the summer of 2016, a network leader told a group of school principals that Denizen planned to have over 10,000 students by 2021. This person said
We’re [4,000 – 8,000] students now. We’re likely to be quite a few more than that in the near future. If we have more regions, if we open more schools, like realistically, the folks in here aren’t going to know everyone—not that well.

Denizen hoped that having practices codified in materials would help compensate for the absence of sustained personal relationships with its newest schools. As turnaround schools, these had new staff and were new to the network. In addition, they were located in geographically distant states. All of these factors made it untenable for the NYC-based hub to rely on relationships for diffusing practices. Yet, at the same time, schools in these outer regions faced different state accountability regimes. Toward the end of data collection, the network began discussing purchasing materials for these regions rather than using staff capacity to adjust the network’s lead plans. They also planned to hire a curriculum specialist for each of the outer regions who would navigate the tensions raised by the desire for standardization of instruction across the networks across multiple state jurisdictions.

Even with a geographically concentrated network and no immediate plans for expansion, Novel also saw specified instructional support as a means of making change at scale. For example, a leader at Novel retrospectively described its decision to begin writing high school curricula and move away from having coaches work with teams of educators to show them “how to develop an effective unit that integrated the Common Core.” The rationale for the shift involved scale. As a leader of social studies professional development explained: “While that

the network would continue to expand as long as there continued to be “wastelands of educational opportunity” because “this is our chance to change the world, and I won’t apologize for it.” However, the network did not add any new schools during data collection. In early 2019, there were media reports of financial trouble and layoffs at the network office.

Their conceptions of “scale” aligned with those in the education policy implementation literature. Namely, a policy that is “at scale” effects substantive, persisting change across classrooms and schools (C. E. Coburn, 2003; Elmore, 1996).
was really valuable for those teachers, after those units were used by that teacher, they didn't have much of an impact on the greater number of schools that we work with.” Novel understood its curricular materials as a mechanism for reaching a greater number of its teachers and schools than it had the capacity to coach, thereby achieving impact at scale.

Scale was a consideration at Metro as well, but in a slightly different sense. Like Novel, expansion was not a part of their immediate plans, but their leadership saw the institutionalization of practice as serving dual goals: affecting the technical core of teaching in their existing schools and disseminating knowledge outside of the network. Metro was opening one new school in Fall 2018, but “continued growth in terms of the number of schools” was not a touchstone of its organizational strategy moving forward. Instead, Metro aimed for “continued organic growth within the schools” and “being an innovation lab.” At the close of data collection, it had recently obtained two large grants for the “dissemination of practices” beyond its network. A Metro leader described the theory of action associated with these grants:

So, when we learn something of value in these schools, we take it to people. We disseminate it. So, it’s developing practices through this school support work, [with] your participating schools, who are testing them with each other… then, at a certain point, it is ready for, beyond [Metropolitan Schools], which gives more context for testing… If we know how to support a school to teach these skills explicitly, and we are seeing impact, which we are… [then we disseminate it].

Informants hinted that Metro’s renewed commitment to dissemination was part of its strategy for obtaining external funding to compensate for resources lost when the terms of its contract with NYCDOE changed (and for proving its ongoing worth to a new chancellor of schools).

Regardless, Metro wanted to position itself as an innovator that developed and disseminated
effective practices. Thus, institutionalization of practices in programs and curricula served its interests, as it also served Denizen’s.

Notably, while both networks pursued the institutionalization of practice, Denizen did so primarily by writing instructional materials. They tied the expansion and refinement of instructional oversight and professional learning closely to these materials. In contrast, Metro codified specific programs of support, some of which included instructional materials. They developed complementary professional learning for each of these programs regardless of the extent to which those programs specified instructional materials. I will explore how these design choices reflected and reinforced beliefs about teachers and teaching in Chapter Seven.

Chapter Five Conclusion

In this chapter, I have documented the various frameworks, materials, programs, and routines that comprise the IGIs of Denizen CMO and Metropolitan Schools. I have also described changes over time and outlined some of the rationales for these changes, including a common interest in the institutionalization of practice. This body of evidence will serve as the foundation for my analysis in Chapters Six and Seven. In the next chapter, I examine alignment, specificity, power, and educativeness in the design of each IGI and discuss the implications for the framing of teacher professionalism at each network.
CHAPTER SIX: Framing Teachers’ Work through Infrastructure

This chapter addresses the second research question, which asked how the alignment, specificity, power, and educativeness in the design and implementation of each network’s IGI framed the work of teachers at each network. In this chapter, I use the four-dimensional framework (i.e., alignment, specificity, power, and educativeness) presented in Chapter Three to analyze the relative positions of the IGIs at Denizen CMO and Metropolitan Schools, providing multiple sources of evidence for my placement of each IGI along these four dimensions. Previous research on these dimensions of instructional policies (sometimes called “policy attributes”) has shown that system instructional forms (such as IGIs) that are more aligned, specified, and powerful are more likely to be implemented with fidelity and to effect sustained change (Desimone, 2002). As shown in Chapter Three, to the best of my knowledge, this dissertation marks the first time since Floden and colleagues’ (1988) study that this framework has been employed to study constructs on professionalism. In contrast to that study, which focused on autonomy, my dissertation also looks at conceptions of the knowledge base for teaching and the locus of authority over practice.

Four-dimensional Analysis of IGIs

In the following sections, I synthesize evidence from Chapter Five and make claims about where each network’s IGI fell along the continua formed by the dimensions of alignment, specificity, power, and educativeness. For each dimension, I compare the relative

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80 It is important to note that the positions of each IGI are relative to one another, rather than absolute measures. Development of an absolute measurement scale and methodology for these dimensions was beyond the scope of this dissertation.
positions of Metro and Denizen. At the end of the chapter, I synthesize the results of the analysis\textsuperscript{81} and examine the framing of the role of teachers implicit in the IGIs’ positions.

**Alignment**

As stated in Chapter Three, alignment represents the level of consistency across and within components of the IGI around what to teach and how to teach it. Alignment is both horizontal and vertical. The lack of school-level data in my study made it difficult to assess vertical alignment (i.e., alignment between the classroom and school-, district-, and state-level sources of infrastructure). Instead, I examined horizontal alignment (i.e., alignment among instructional frameworks, instructional materials, assessments, instructional oversight, and professional learning).

**Alignment in Denizen’s IGI.** Overall, the elements of Denizen’s IGI were relatively well-aligned to one another. I describe that alignment and highlight areas of misalignment below. Then, I summarize the alignment among elements in Table 6.1 at the end of this section.

**Instructional Frameworks.** The network made concerted efforts to align its instructional materials (whether they were developed in-house or purchased) with the Common Core Learning Standards (CCLS) and the Next Generation Science Standards (NGSS). In some areas, this alignment had not yet reached what staff considered to be the optimal level, but as described in Chapter Five, this perceived misalignment led the network to either revise or replace resources.

In terms of alignment between the CCLS and summative assessments within Denizen’s IGI, the state standardized tests for third through eighth grades and the high school Regents

\textsuperscript{81} Although the dimensional analysis relied on IGI characteristics, assessed through examination of stakeholder descriptions and document analysis, I did include some instances of stakeholder sensemaking in this chapter where it was closely tied to questions of alignment, specificity, power, or educativeness (rather than to broader discussion of teacher knowledge, authority, or autonomy).
exams were all aligned to the CCLS and the NGSS. Techniques for formative assessment were aligned somewhat with content-generic practices (e.g., exit tickets, methods for checking understanding) in *Teach Like a Champion*.

With respect to the alignment between instructional frameworks and instructional oversight, teacher coaching and observations were highly aligned to the guidance in *Teach Like a Champion*. The expectations for intellectual preparation (which were varied and changing) did not clearly align to any framework referenced in artifacts or mentioned by stakeholders.

Professional learning for teachers was relatively aligned to the instructional frameworks: curriculum-centered professional development focused on the standards and/or curricula aligned to the standards; sessions focused on pedagogical or school culture focus were aligned to *Teach Like a Champion* and/or *The Ethic of Excellence*.

**Instructional Materials.** Assessments at Denizen were very closely tied to instructional materials. Network-written lesson plans included embedded formative assessments. In terms of summative assessments, there were common interim assessments tied to the curricula in many subject areas and grade levels. In addition, instructional materials for the “tested” grade levels (i.e., those with external standardized testing) aligned closely with the frameworks that guided the design of those tests. However, there were some reservations about this. For example, one staff person described how curriculum specialists were “backwards planning” from the Regents exams but also said, “Really [the Regents are] ultimately a low bar that we want to go way beyond… we have a lot more work to do, and we’re just not there yet.”

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82 Recall from Chapter Five that intellectual preparation was a process of teachers engaging with lesson plans prior to instructional delivery in order to internalize the lesson materials and plan for student misconceptions.
At Denizen, which operates in multiple states, schools faced different state accountability frameworks (and students took different accompanying standardized tests). Thus, staff at the central office felt that the network-developed curricula, which had been developed with New York State primarily in mind, were not necessarily appropriate for teachers and students in other states. At the close of data collection, staff were discussing purchasing commercially-produced curricula aligned to the accountability frameworks of certain states in which they operate. This was another example of structures in the external environment shaping infrastructure design.

Instructional oversight aligned closely with instructional materials in grade levels and subject areas for which Denizen specified daily plans. Curriculum specialists conducted classroom observations to monitor the implementation of the lead plans and coached teachers in their use. Processes for submitting evidence of intellectual prep to school leaders also tied the implementation of curricular materials to instructional oversight. However, in the grades and subjects where materials were not specified (e.g., high school ELA, advanced placement classes), oversight was necessarily not aligned.

Finally, there were many professional learning opportunities aligned to the instructional materials. Not all were, but arguably, there are other matters of importance that also warrant professional learning, such as pedagogy, classroom organization, or school culture.

Assessments. Assessments closely aligned with instructional oversight. As mentioned earlier, test scores were an integral part of principal and teacher evaluations. The network tied monetary rewards tied to student performance outcomes on summative assessments.

In terms of alignment between assessments and professional learning, there was some interesting dissonance. At the same time as they emphasized testing in professional learning

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83 At one observed professional learning session, network staff seemed to be prioritizing state tests, but teachers were prioritizing what they believed students needed to learn. However, this misalignment between the professional
sessions, Denizen’s network staff expressed misgivings about it. For example, at a “data dive” professional learning event for analyzing test results, staff warned teachers against using item analysis alone to guide their instruction. A staff person said, “Make sure you’re prioritizing the standards. Don’t just focus on areas in which kids struggled,” but then referred teachers to the state test guides for information about how to prioritize standards. In doing this, the facilitator prioritized the test (and the interpretation of the standards therein) over the standards themselves.

**Instructional Oversight.** Alignment between instructional oversight and professional learning at Denizen was minimal. In discussing their plans for future professional learning, several informants expressed a desire to more closely link the topics in PL with patterns observed in field visits. This effort was a work in progress.

**Summary.** Table 6.1 below summarizes findings regarding alignment within Denizen’s IGI. For every possible area of alignment among the five IGI elements, I assigned a rating of “highly aligned,” “somewhat aligned,” or “less aligned” to indicate the extent of alignment between those two areas relative to the alignment among other areas.

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learning in Denizen’s IGI and teachers’ espoused goals was not captured by the alignment construct as conceived in the policy attributes literature (reviewed and cited in Chapter Three). I discuss this and other gaps in the framework later in the dissertation.
### Table 6.1

*Summary of Alignment within Denizen’s IGI*

<table>
<thead>
<tr>
<th>Instructional Frameworks</th>
<th>Instructional Materials</th>
<th>Assessments</th>
<th>Instructional Oversight</th>
<th>Professional Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Frameworks</td>
<td>-</td>
<td>Somewhat aligned</td>
<td>Somewhat aligned</td>
<td>Highly aligned</td>
</tr>
<tr>
<td>Instructional Materials</td>
<td>-</td>
<td>-</td>
<td>Highly aligned</td>
<td>Somewhat aligned</td>
</tr>
<tr>
<td>Assessments</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Highly Aligned</td>
</tr>
<tr>
<td>Instructional Oversight</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Less Aligned</td>
</tr>
</tbody>
</table>

**Alignment in Metro’s IGI.** As shown by the evidence in the following sections, the elements of Metro’s IGI were less aligned with one another compared to Denizen’s. I highlight areas of alignment and misalignment below.

**Instructional Frameworks.** The instructional frameworks mentioned by leaders at Metro were somewhat aligned with instructional materials. For all schools, there was a blanket expectation from Metro and NYCDOE that all mathematics and literacy instruction would be Common Core aligned, regardless of the instructional materials used. Metro did not provide or recommend instructional materials outside of its small mathematics pilots (i.e., Jump Math in middle school and Metro Algebra for ninth grade) and high school science and social studies (i.e., Novel curricula). These curricula were aligned to the CCLS, NGSS, NYS Science Framework, NYSSLS, and guidance from Stanford History Education Group (SHEG).

For subject areas and grade levels outside of those covered by these instructional materials, any alignment between standards and the materials teachers chose to use did not result
However, as their director of instructional support explained, Metro did reserve time during meetings of their curriculum-agnostic PLCs for helping teachers “select appropriate curriculum” and bringing teachers “together to look at curriculum documents.” They used protocols for “gap analysis” in order to get teachers thinking about “places in the curriculum maps” (from their schools) where there were “gaps with Common Core alignment” and how they could fill those gaps. In this respect, efforts to align professional learning with learning standards may have served to increase alignment with instructional materials used across Metro’s schools.

In terms of alignment among instructional frameworks and assessments, state standardized tests were aligned with learning standards, as at Denizen. Even though Metro and Denizen operated in different sectors, both networks had to incorporate this aspect of the state policy exostructure into their IGIs. This exostructure seemed to be at the root of nearly all the uniformity found across the two IGIs.

Relative to Denizen, however, there was less overall alignment among frameworks and assessments at Metro, simply because there were fewer subjects and grade levels with shared interim assessments. The DRP assessments in literacy and the Metro Algebra assessments were aligned to the Common Core. Novel’s curricula included standards-aligned interim assessments as well, but Novel was working on strengthening this alignment, which one of their leaders said “was not as great in the first iteration of the curriculum.”

With respect to the alignment between instructional frameworks and instructional oversight, the limited coaching at Metro aligned to programs, many of which (e.g., data

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84 I was unable to assess this alignment, and it was not included in my estimation leading to the alignment rating in Table 6.2 at the end of this section. The coverage of the IGI across grade levels and subject areas is captured by the dimension of specificity.
management and analysis, social and emotional learning) did not align to the frameworks they referenced when describing their overall IGI. In addition, Metro personnel did not do evaluative teacher observations.

Metro staff intentionally aligned almost all of its professional learning, even sessions not directly related to instructional materials, in some kind of framework. The research team observed or heard descriptions of PL grounded in Danielson, the Instructional Rounds model of intervisitation, and The Artisan Teaching Model, as well as the state regulatory framework for CTE, which included CDOS.

**Instructional Materials.** As mentioned above, in the subjects and grade levels for which Metro had developed or recommended instructional materials, there were aligned assessments. However, there were many grade levels and subject areas for which Metro did not provide or recommend instructional materials. As a result, there was a wide array of instructional programs in use across the network, and thus, there was likely a wide array of assessments in use. Similar to Denizen, the degree of alignment that existed between instructional materials and state standardized assessments at Metro was a function of the common instructional frameworks informing the design of each.

In terms of alignment between instructional materials and professional learning, the provision of instructional materials was prerequisite. Since so much of the PL at Metro was curriculum-agnostic, alignment was relatively low in this area. There were two exceptions. Within high school science and social studies, Novel staff described working to align its “systems” for “curriculum, data, [and] professional development.” Their goal was for PL to be “on some tool that you can use in your classroom, rather than one shot on something you have to pay for or is hard to access or is incomplete.” In general, there was an effort at Novel to more
closely align instructional materials with professional learning by “using our curriculum or using any curriculum as a common foundation to support APs and instructional leaders in making better use of” professional learning time. Metro teachers who attended science and social studies professional learning at Novel experienced the results of these efforts, but others did not.

In terms of alignment with systems for instructional oversight, Novel’s staff also wanted to “provide some level of day to day support” for teachers using their instructional materials: “going forward, we want all school-based work to be integrated with the curriculum and professional development—not as a separate thread.” As it stood, many coaches had been supporting inquiry teams within schools, but alignment had been a challenge. As one explained: “The inquiry work feels mostly separate to everybody involved. It looks very different from school to school. It looks very different from campus to campus.” Novel was preparing to change the thrust of its coaching visits in order to support teachers and leaders with Advance evaluations. To this end, Novel staff was “doing cross-walks between our curricular resources and the Danielson framework” to think about “how our curricular resources could support teachers in meeting instructional goals.” The leader of Novel’s instructional team described a new strategy of “coaching in service of curriculum” that would use coaching to oversee the implementation of the curriculum. One of Novel’s leaders described this vision: “If I'm writing some curriculum, I want to go to schools and see how it lands with kids, to see what we need to revise.” This oversight was aimed more at evaluation of the instructional materials than at the evaluation of teacher competence. At Denizen, in contrast, observations of curriculum use seemed to be about both.

Although Novel was working to improve alignment in its IGI, this would not improve alignment in Metro’s IGI. Metro’s teachers using Novel curricula could attend PL events, but
they would not receive in-school support from Novel personnel. Metro worked to align its PL with its programs, but only two of the 10 to 15 programs they offered were specifically related to instructional materials. Math teachers at one Metro middle school and in ninth grade Algebra had a monthly PLC. Outside of that, PL was not aligned to instructional materials.

**Assessments.** To an extent, assessments at Metro were aligned to instructional oversight. For example, Metro used the results of DRP literacy assessments to keep tabs on the reading skills of students across its network. It saw the interim assessments in Metro Algebra as one of its only tools for gauging the efficacy of the new programs. Metro also used the results of state standardized tests and credit accumulation data to inform its annual school goal-setting process. As one Metro leader described: “We try to bring it from ‘This is what I believe’ to ‘This is what the data’s telling us.’” In recent years, Metro had implemented data tools created by Novel across their entire network. One of their PLCs was dedicated to training school leaders and data specialists in using this tool for oversight and goal-setting within schools.

At the school level, there was also alignment between the results of state standardized tests, the school Quality Review process, and Advance teacher evaluations, but Metro’s IGI was not responsible for this. In fact, some Metro personnel worried about dissonance between their IGI and the assessments that were part of the state and city’s regulatory frameworks and their own IGI. One network leader said:

I think the potential misalignment between what supervisors are looking for based upon the evaluation frameworks and based upon what we advocate for and/or what the exams advocate for, causes the teachers to often have to navigate a very politically fraught space.
This leader expressed sympathy for teachers who worked at the intersection of multiple IGIs, some of which had conflicting elements.

Ironically, this misalignment made state assessments and teacher evaluations into topics of conversation during professional learning. In two separate PLC meetings and at a teacher staff meeting, I observed the same leader give school principals and teacher leaders time for collective sensemaking around this misalignment. These principals and teachers verbally grappled with the challenges of teaching to broad standards and preparing students for tests that were narrow measures of skills. For example, one teacher said: “It seems like content subjects are so handcuffed by assessments. Almost no fourth graders can do their times tables, and we can’t stop because the test is coming, and later they will use calculators.” Another said: “Unit plans focus on moving through a string of standards. Today it is this standard, tomorrow it is that standard… we’re not giving kids enough time to process.” These are just two representative comments from many cases of this kind of reflection. There was widespread concern that tests were not aligned with student needs and instruction was not meeting students at their level. In some sense, this was an instance of horizontal alignment because the networked linked time in PL to assessments—Metro intentionally gave PL participants time to process their emotions about testing and think across the elements of the IGIs they faced in their daily working lives. However, stakeholders spent this time discussing the misalignment between testing and their values. Analysis of this irony illustrated a shortcoming of the four-dimensional framework—the dimension of horizontal alignment, in its current conception, does not capture alignment between elements of an IGI and practitioner beliefs.
**Instructional Oversight.** Alignment between instructional oversight and professional learning was also relatively low. Novel’s efforts to start “coaching in service of curriculum” aimed to improve this:

If we have a professional development group and I'm teaching a group of teachers how to do something, I'm going to go to schools to see if they’re able to do what it is I am teaching or to inform how I will revise my professional development to support that group.

While the emerging revisions could potentially benefit Metro teachers participating in the science and social studies professional development groups, this school-based oversight excluded them. This again illustrated fragmentation in Metro’s IGI, stemming from its environmental position and limited capacity.

Although Metro was a support organization, it did engage in a goal-setting process with its principals that used the same data informing more formal oversight processes conducted by NYCDOE superintendents. Metro staff understood their monthly meetings of the principals’ PLC as professional learning. In these meetings, they worked to support principals with their goals. This was one source of alignment between professional learning and oversight.

Metro also collaborated with personnel from one of the three SOs overseeing their schools to try to align goals. The leader of the school goal-setting process said, “We’ve tried a lot, this year in particular, to align to the affinity superintendent’s goals, and make that really explicit for our principals, to relieve some of the pressure on them.” Although this process proved challenging (“It’s really hard to align”), multiple staff thought it was worth the effort to streamline the messages principals were receiving from the multiple entities sending guidance to their schools. This illustrated Metro’s awareness that its IGI intersected with others at the school
level and recognition that overlapping guidance was a potential source of confusion or stress for school-based practitioners.

**Summary.** Overall, there was relatively low horizontal alignment among elements of Metro’s IGI. Table 6.2 below displays a summary of the relative extent of alignment among various elements of Metro’s IGI.

**Table 6.2**

*Summary of Alignment within Metro’s IGI*

<table>
<thead>
<tr>
<th></th>
<th>Instructional Frameworks</th>
<th>Instructional Materials</th>
<th>Assessments</th>
<th>Instructional Oversight</th>
<th>Professional Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Frameworks</td>
<td>-</td>
<td>Somewhat aligned</td>
<td>Somewhat aligned</td>
<td>Less aligned</td>
<td>Somewhat aligned</td>
</tr>
<tr>
<td>Instructional Materials</td>
<td>-</td>
<td>-</td>
<td>Somewhat aligned</td>
<td>Less aligned</td>
<td>Less aligned</td>
</tr>
<tr>
<td>Assessments</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Somewhat aligned</td>
<td>Somewhat aligned</td>
</tr>
<tr>
<td>Instructional Oversight</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Less aligned</td>
</tr>
</tbody>
</table>

None of the pairs of elements were highly aligned. There were many reasons for this. Since the 2015 reorganization of the DOE (described in Chapter Five), schools in Metro’s network had been contending with instructional guidance coming from multiple sources. This was one factor contributing to existing inconsistency across the network’s schools. In addition, the nature of Metro’s role as a support organization, which left it unable to formally mandate the uptake of any program, also contributed to widespread variation.
Beyond these factors, variation was also a product of organizational culture—to an extent, uneven implementation was intentional. Metro had a strong tradition of supporting school autonomy. However, resource constraints made it difficult to tailor customized supports to all of the network’s schools. As described in Chapter Five, Metro’s leaders managed these constraints through changing their model of program delivery, but each of its schools still participated in a customized suite of programs. Some programs, like the use of Novel’s data tools, were universal across the network. However, for the most part, the constellation of programs at each school was unique. As a network leader described: “In some schools there [was] overlap [in programs], in some schools there [was] not.” Metro’s pilot model of implementation complemented this approach. As another network leader said:

Schools have certain bandwidth to absorb support. We have a certain bandwidth for providing support, so rolling it out to all [Metro schools] at once didn’t make sense on either side, so the way we tend to roll out things like this is to start with, you know, a pilot of a subset of the whole, work out the kinks in the system, and then roll that out. Piloting was a safe (i.e., manageable and affordable) way for Metro test the waters with a new program before rolling it out across the entire network.

Nonetheless, misalignment across the IGI and alignment with parallel IGIs from the SOs and AFSC were of concern to Metro leadership. Toward the end of data collection, staff at Metro’s central office began reading *Coherence* (Fullan & Quinn, 2016), a guide for district or network planning, with a specific aim to “codify and define the different buckets of services they offered.” This also involved aligning their services with those of the SOs and the AFSC. One leader described their emergent focus on the coordination of school support efforts:
There’s some restorative justice stuff that [AFSC is] doing, and generally it’s complementary to our work, so we don’t worry about it too much… in a case, where there is a really big [matter] going on in our school… we want to be all on the same page… really, to coordinate… how those supports get accepted and digested.

Ironically, staff at NYCDOE Central, which was responsible for the complex landscape of the school system, were also reading this book.

In contrast, Novel had a mixed approach to alignment. Staff there seemed to recognize that not all teachers who used their curricula would benefit from increasing the alignment in the IGI for their network schools. Novel curricula were publicly available, and they were proud of the fact that many teachers outside of their network had used it:

There are certainly at least 20 or 30 different states in which I have teachers that have indicated they are using something from the website to some degree, which is not national scale, but… We're not as famous as EngageNY, but its growing.

While Novel worked to align and expand the IGI for its network teachers, they were simultaneously interested in developing “multiple entry points for teachers” to use the curricula, even “teachers who aren't attending our PDs.” This led to misalignment for those teachers who could not participate, like Metro’s. This was a tradeoff they were willing to make. As one staff member referencing the misalignment facing “more and more people across the state using our curriculum” said, the organization was “thinking about… one, can they make use of our resources, and two, do we want them to make use of our resources?” This person said that they did, seeing the use of one element of the IGI (instructional materials) as a benefit for teachers, even if this benefit was not as great as the benefit of participating in a fully aligned system of supports as a teacher at a Novel school. Metro’s decision to encourage their teachers to use
Novel’s curricula and attend Novel’s professional learning (even though their teachers would not receive the aligned coaching) indicated that Metro’s leaders had also done this calculation and come to the same conclusion.

**Comparison of Alignment.** Overall, the elements of Denizen’s IGI were highly aligned with one another relative to Metro’s. Unlike Denizen, which had three pairs of areas that were “highly aligned” and only one that was “less aligned,” Metro had no pairs of areas that were “highly aligned” and four areas that were “less” aligned. Table 6.3 below shows which network was more aligned for each possible pair. For every pair of areas except for one, Denizen was relatively more aligned. Thus, overall, Denizen’s IGI had a greater degree of alignment than Metro’s.

**Table 6.3**

*Network with Greater Alignment*

<table>
<thead>
<tr>
<th></th>
<th>Instructional frameworks</th>
<th>Instructional Materials</th>
<th>Assessments</th>
<th>Instructional Oversight</th>
<th>Professional Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Frameworks</td>
<td>-</td>
<td>Denizen</td>
<td>Denizen</td>
<td>Denizen</td>
<td>Denizen</td>
</tr>
<tr>
<td>Instructional Materials</td>
<td>-</td>
<td>-</td>
<td>Denizen</td>
<td>Denizen</td>
<td>Denizen</td>
</tr>
<tr>
<td>Assessments</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Denizen</td>
<td>Denizen</td>
</tr>
<tr>
<td>Instructional Oversight</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Metro</td>
</tr>
</tbody>
</table>

**Emergent Finding.** When conducting this analysis, it became clear to me that specificity within the category of instructional materials (something that the dimension of alignment, as
defined in the policy attributes literature, does not capture) strongly influenced horizontal alignment across IGI elements. For example, there was a much wider variety of instructional programs used across Metro’s schools. As a result, it was more challenging for Metro to align instructional frameworks, assessments, instructional oversight, and professional learning. At Denizen, there were shared curricula for many more grade levels and subject areas. These curricula acted like a “glue” that enabled a greater degree of alignment across the entire IGI. This phenomenon illustrates one potential value of shared curricula. As previous research has shown, “teacher professional learning is best accomplished when both formal and on-the-job professional learning opportunities are supported by a wider infrastructure” (Shirrell et al., 2019, p. 610). At Denizen, the instructional materials appeared to be the cornerstone that supported the construction of a wider infrastructure spanning all elements of comprehensive instructional guidance.

Despite marked difference in the extent of alignment, both networks were working towards increasing alignment (see Figure 6.1).

**Figure 6.6**

*Trends in IGI Alignment at Denizen and Metro*

*Note.* The dashed arrows represent change over time. The position of each network is relative to the other, not to the poles of the continuum.
This trend over time suggested that both networks recognized that high levels of IGI alignment would be advantageous. Also, limited organizational capacity appeared to be a common challenge for both—due to funding challenges, Denizen, Metro, and even Novel all had less of a school-level presence than they wanted. As a network leader at Novel explained, this reality made it harder to shift teacher practice:

We are really well positioned to develop foundational materials that are aligned to standards that have a common scope and sequence, that have a thoughtful design to them. I think we are really well positioned to provide unit-based PDs that support teachers in understanding the standards and making sense of the assessments and unpacking them and lesson planning. We aren't well-positioned to help teachers shift their daily practice because we simply don't see them enough.

All three organizations viewed coaching as a high leverage investment but were not yet able to invest as many resources into it as they would have preferred.

In practice, the perspective of network personnel was congruent with findings in the educational policy literature: “Well-defined and well-specified instructional improvement programs that are strongly supported by on-site facilitators and local leaders who demand fidelity to program designs can produce large changes in teachers’ instructional practices” (Correnti & Rowan, 2007, p. 298). Denizen and Metro recognized coaches’ capacity to enhance teacher learning (C. E. Coburn & Russell, 2008; Hopkins et al., 2013). Denizen, which had developed its instructional materials to a great extent, was transferring its resources to support coaching aligned with those materials. In contrast, Metro was beginning to develop instructional materials and split its organizational capacity between ongoing curriculum writing (in Algebra) and limited coaching as part of that initiative.
Specificity

Recall from Chapter Three that specificity is a measure of the level of detail in instructional frameworks and curricular materials, ranging from extensive and focused guidance to weak guidance. In assessing specificity, I looked first at the provision (or absence) of various types of instructional materials, including learning objectives, unit plans, lesson plans, pacing guides, and student-facing materials. For the purposes of this particular analysis, the source of the materials (e.g., network-written, commercially-produced) or the nature of the provision (e.g., mandate, recommendation) were not at issue. After looking at the extent of guidance provided across a range of materials, I examine the approaches to scripting in the materials used at each network. Notably, there was marked variation in the use of scripting across grade levels and subject areas within each network’s suite of instructional materials. In this section, I demonstrate patterns in this variation. In Chapter Seven, analysis of stakeholder sensemaking uncovers how, at Denizen, this variation reflected beliefs about differences among teachers across grade bands and subject areas.

Specificity in Denizen’s IGI. As described in Chapter Five, Denizen began implementing daily lesson plans in their middle grades several years prior to the start of data collection. During data collection, their academic team was working on increasing the codification of curricular resources in the elementary grades and developing instructional

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85 I do not compare the specificity of instructional frameworks because of the similarity in the set of frameworks used by each network.

86 I address variation in the nature of the provision (i.e., conditions of implementation) and its interaction with specificity in the section on power later in the chapter.

87 Figure 3.2 summarizes the relationship between approaches to scripting and specificity.
materials for some high school courses. At the end of data collection, however, this project was largely put on hold in favor of putting curriculum writers into the field as instructional coaches.

Despite this, Denizen had already achieved a high level of coverage across grade levels and subject areas. As shown in Table 6.4 below, Denizen provided elementary and middle school teachers with the full range of instructional materials in all of the core content areas. It also provided a full range of materials for the first two years of high school math and social studies, as well as two years of high school science. There were no specified curricular materials for Grades 11 and 12 for math, science, or social studies. High school ELA teachers received a unit plans that included learning objectives and a pacing guide but no lesson plans (neither commercially-produced nor network-written) or student-facing packets. Despite these gaps, the extent of coverage in the provision of instructional materials was evidence of a high level of specificity.
Despite this relatively uniform provision of materials at Denizen, there was wide variation in the approach to scripting within lesson plans. Table 6.5 below summarizes estimates\textsuperscript{88} of the extent and kinds of lesson scripting in the instructional materials provided by the network.

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\textsuperscript{88} I use the word “estimate” purposefully. For subject areas and grade levels with network-written lesson plans (what Denizen staff called their “lead plans”), I derived these estimates from informants’ descriptions of the lead plans. In some cases, up to five stakeholders spoke about the structure of the lesson plans, but in a few cases, only one described the plans for a particular subject area and grade band. The network did not respond to requests for samples of lead plans, and unlike Novel’s resources, Denizen’s lead plans were not publicly available. Thus, it was not possible to triangulate stakeholder descriptions against document evidence. I plan to attempt to obtain samples again prior to submitting articles based on this dissertation to peer-reviewed academic journals. I did review samples of lesson plans from Ready Reading, EngageNY (also known as Eureka Math), and Pearson Interactive Science.
### Table 6.5

**Approach to Scripting in Denizen’s Lesson Plans**

<table>
<thead>
<tr>
<th></th>
<th>ELA</th>
<th>Mathematics</th>
<th>Science</th>
<th>Social Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive scripting</td>
<td>E, M</td>
<td>E, M, H₉,₁₀</td>
<td>E, M, H₉,₁₀</td>
<td>E, M, H₉,₁₀</td>
</tr>
<tr>
<td>Explicit scripting</td>
<td>E, M-</td>
<td>E, M-, H⁻⁹,₁₀</td>
<td>E, M-, H⁻⁹,₁₀</td>
<td>E, M-, H⁻⁹,₁₀</td>
</tr>
<tr>
<td>Blended scripting†</td>
<td>E, M</td>
<td>E, M-, H⁻⁹,₁₀</td>
<td>E, M-, H⁻⁹,₁₀</td>
<td>E, M-, H⁻⁹,₁₀</td>
</tr>
<tr>
<td>Lessons without scripting</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>No lesson plans provided</td>
<td>H</td>
<td>H₁₁,₁₂</td>
<td>H₁₁,₁₂</td>
<td>H₁₁,₁₂</td>
</tr>
</tbody>
</table>

**Notes.** E = Elementary grades, M = Middle grades, H = High school grades. -- = None, X- = To a limited extent. Grade levels shown in subscript.

† Blended scripts combine descriptive and explicit scripting.

In every grade band and content area for which Denizen provided instructional materials, all lesson plans, regardless of whether they were network-written or commercially-produced, included descriptive scripting. This type of scripting describes what teachers should say, display, and do without including explicit scripting of things teachers could say out loud. (This is noteworthy. Although one might assume that any lesson plan from any source whatsoever includes descriptive scripting, analysis of instructional materials at Metro showed that this is not always the case.) In contrast to the uniform presence of descriptive scripting, there was variation in the use of explicit scripting. This reflected a range of opinions about its utility across Denizen’s leadership and among the members of the instructional team.

In lead plans at the elementary level, explicit scripting was prevalent. One of the elementary curriculum specialists described the approach across the content areas: “For
elementary, we script out everything… giving clear, ‘What are the expectations, what are the objectives, how you deliver it, what are some exemplar teacher models and responses?’” The two curriculum specialists for teachers in this grade band were emphatic in their support for explicit scripting, especially for teachers expected to teach across the core content areas. As the other specialist explained: “The overall challenge for science and social studies is just being one person and the sheer number of units.” This specialist drew a contrast between their perception of teachers’ experience implementing revised science and social studies units (which incorporated quite a bit of scripting) and teachers’ experience using older “textbook-driven” materials (which contained fewer instances of scripting). The specialist claimed that the specificity provided by scripting in lesson plans gave teachers a higher, much-needed level of support:

You'll go from a unit that I have written to a unit that I haven't, and it’s often hard for teachers to go from that level of having scripting and support to now being given this lesson that they have to mosh things together and come up with different things. Although I can certainly support, it is a different level of support than when you're giving teachers everything that they need and just trying to build that cohesion.

In this comment, the specialist framed the work of “mosh[ing] things together and com[ing] up with different things” as a burden for teachers that scripting helped to relieve.

The other elementary specialist echoed this understanding that scripting lifted an intellectual burden from teachers, indicating that it was easier for a person in a curriculum development role to plan next steps:

I am able to look at it from an overarching perspective. I know where they need to go. I think that having it really scripted is just, I know from being a teacher, from being at a
school that didn't provide any resources, being at a school that did, it can feel really restrictive sometimes but you really appreciate it when you leave those places when you're not given those resources. Knowing where you can make those adjustments, make the plans your own. Having them is so much better than not.

This curriculum specialist recognized a tradeoff in having scripting sometimes “feel restrictive” but thought the added support was worth it.

In contrast, writers for higher grade levels were not in favor of explicit scripting, despite the fact that much of the existing network-developed curriculum had already been scripted in this way (by previous team members who had since left). As shown in Table 6.5, lesson plans for the middle and high school grades used explicit scripting sparingly. This was a common trend across all the content areas. As mentioned in Chapter Five, during their revisions, the middle school ELA curriculum specialists were actually removing much of the explicit scripting from the lead plans (written by someone who had left the network). One of them said: “Sometimes when there's think aloud that's required, I'll put in a script. Otherwise, no. I personally don't like overly scripted materials. I think it's too restrictive.” Similarly, the science specialist said, “I generally don't like doing it” in response to my question about explicit scripting. Someone from the math team gave examples of descriptive scripting (e.g., “You might want to discuss this topic” or "Ask scholars what they think about this topic") but said explicit scripting was limited: “It's very rare that there's anything [in the lead plans] that they would say verbatim.”

The new leader of the instructional team was among those who doubted the utility of explicit scripting. Their concern was that the high level of specificity inherent in explicit scripting would make lesson delivery too teacher-centered. The new leader explained:
The curriculum needs to be robust enough that... my goal when I was writing the lessons plans was always, including when I was teaching, I could just walk out of the room for 10 minutes and the kids would continue to do all the learning, and I could come back in and be like, “Great.”

Describing an instructional vision for “exploratory learning” that integrated a “constructivist approach” and would “build independence” for students, the leader worried that explicitly scripted lessons would make it impossible for teachers to cultivate the level of student-centered activity and engagement that would permit a teacher to leave the classroom for 10 minutes. Ironically, the leader of the instructional team thought that adding more specificity to lesson plans (by incorporating explicit scripting) made the curriculum less “robust” because it led to a flow of lesson activities that relied heavily on the words of the teacher.

Interestingly, a staff member who favored scripting also saw the extent of specificity as a leverage point for shaping instructional practice. In contrast to the team leader, however, this staff member thought having a “more codified” curriculum would help the network realize goals of “slowing down and not being as test-preppy and actually doing more inquiry and taking the time to do more authentic writing.” This person reported “actually fighting with a few teachers” (who worried about covering the whole curriculum if they slowed down to do inquiry and authentic writing) and saw highly-specified lesson plans, which they thought would shift the teacher’s practice toward the desired model, as a means for resolving the conflict.89

Other members of the instructional team who shared concern about explicit scripting worried that it enabled teachers to skip intellectual preparation. For example, in mathematics, the

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89 This illustrates a common recognition that the structure of lesson plans plays a role in shaping practice. Note that it was not clear from the comments whether this person saw explicit scripting as essential to “more codification.”
lead specialist described efforts to reformat plans to reduce the level of specificity in order to prevent teachers from “print[ing] them and hand[ing] them out” without intellectually engaging with the lesson plans first. This person described conversations with a colleague and close collaborator in the same subject area:

We even talked about trying to change the way we format our lessons so that we are changing the [intellectual prep] so that it’s not laid out in a way that could be printed and used. For middle school, we’ve talked about, not going too far from where we are now, but even just the Do Now page is blank or the Do Now page has one problem, and then it’s a box and says, fill in one problem here. So, structuring it in a way that would actually require that the teacher would have to do something before printing it out.

This concern about teachers not “do[ing] something” prior to teaching a lesson was the impetus for the shift to a “resource bank model” with “structured notes” described in Chapter Five. A related strategy involved shifting from two sets of materials, one teacher-facing and one student-facing, to one. Under the new team leader, Denizen has done this:

We used to do the very standard: “There's a lesson plan, and there's a scholar worksheet.”

Now there's a scholar worksheet with Microsoft Word comments in it about execution for the teacher and this idea of “You really shouldn't have this entire separate other thing, because you should never be holding up a lesson in front of your face and trying to figure out something while you're with kids.”

Integrating the teacher instructions into the same document as the student materials was a strategy for preventing having teachers reading off of their plans during lessons. It was unclear whether this was making a difference. Notably, the team leader also used the word “execution” to describe teaching, framing discussion of lesson plans in terms of delivery.
Overall, Denizen’s IGI had a relatively high degree of specificity. At the close of data collection, the instructional team was planning to maintain the current level of coverage in their provision of instructional materials (see Table 6.4). For lesson plans in the middle and high school grades, the team was backing away from explicit scripting. Thus, overall the IGI was moving toward being slightly less specified.

**Specificity in Metro’s IGI.** A slight reduction in specificity at Denizen, however, would still result in an IGI that was much more specified than Metro’s. As described in Chapter Five, Metro did not provide or recommend instructional materials to teachers outside of middle school math, ninth grade algebra, high school science, and high school social studies. Within these categories, there was variation in the extent to which Metro’s provision covered the full range of instructional materials. Table 6.6 below summarizes this coverage.

**Table 6.6**

*Provision of Instructional Materials at Metro*

<table>
<thead>
<tr>
<th>Learning objectives</th>
<th>ELA</th>
<th>Mathematics</th>
<th>Science</th>
<th>Social Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>M†, H†</td>
<td>M‡, H</td>
<td>M†, H</td>
<td>M†, H</td>
<td></td>
</tr>
<tr>
<td>Unit plans</td>
<td>--</td>
<td>M‡, H-9</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Pacing guides</td>
<td>--</td>
<td>M‡, H-9</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Lesson plans</td>
<td>--</td>
<td>M‡, H-9</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Student-facing materials</td>
<td>--</td>
<td>M‡, H-9</td>
<td>H</td>
<td>H</td>
</tr>
</tbody>
</table>

*Notes.* Metro had no elementary schools; M = Middle grades, H = High school grades. Grade levels shown in subscript. -- = None, X- = Some, but not a complete set.

P For pilot schools only
†At the standards level. Metro did not provide schools with more fine-grained objectives in ELA.

Overall, the extent of coverage in instructional materials at Metro was considerably lower than at Denizen, especially considering that provision was not uniform across their network’s schools (unlike at Denizen, where a resource for a particular grade level and content area was provided to all schools). The middle school math pilot was only active at one of Metro’s schools. Approximately ten schools were participating in the pilot of the new Metro Algebra program, which was not completely developed at the close of data collection (i.e., there were unit plans for the first few units, but not for the entire academic year). There was a bank of “vetted” lesson plans and activities available to participating teachers, but there were not daily plans available at the lesson level. In contrast, Novel’s science and social studies curricula included daily plans and student-facing materials at the lesson level. In addition, these curricula included instructional materials not captured by the original typology laid out in Chapter Three: glossaries of key vocabulary, separate laboratory activities for science, a guide to instructional routines (e.g., in social studies, these included routines for content-area intellectual practices such as sourcing, annotating, close reading, connecting cause and effect, corroborating evidence, and more), and a short guide to adapting lesson plans for one’s own classroom.

Analysis of approaches to scripting in lesson plans at Metro also showed much lower degree of specificity than in Denizen’s. Table 6.7 below summarizes approaches to scripting across the lesson plans provided or recommended by Metro, illustrating considerable variation.
Table 6.7

*Approach to Scripting in Metro’s Lesson Plans*

<table>
<thead>
<tr>
<th></th>
<th>ELA</th>
<th>Mathematics</th>
<th>Science</th>
<th>Social Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive scripts</td>
<td>n/a</td>
<td>M&lt;sup&gt;P&lt;/sup&gt;, H&lt;sup&gt;ND&lt;/sup&gt;</td>
<td>H</td>
<td>--</td>
</tr>
<tr>
<td>Explicit scripts</td>
<td>n/a</td>
<td>M&lt;sup&gt;P&lt;/sup&gt;, H&lt;sup&gt;ND&lt;/sup&gt;</td>
<td>H-</td>
<td>--</td>
</tr>
<tr>
<td>Blended scripts</td>
<td>n/a</td>
<td>M&lt;sup&gt;P&lt;/sup&gt;, H&lt;sup&gt;ND&lt;/sup&gt;</td>
<td>H-</td>
<td>--</td>
</tr>
<tr>
<td>No scripting</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>H</td>
</tr>
<tr>
<td>No lesson plans provided</td>
<td>M, H</td>
<td>H&lt;sub&gt;10,11,12&lt;/sub&gt;</td>
<td>M</td>
<td>M</td>
</tr>
</tbody>
</table>

*Note.* Metro had no elementary schools; M = Middle grades, H = High school grades. Grade levels shown in subscript. n/a = Not applicable, -- = None, X- = To a limited extent.

ND No data

P For pilot schools only

As Table 6.7 above shows, there was no scripting in Novel’s social studies lesson plans. Each social studies lesson plan included unit essential questions, supporting questions relevant to that particular lesson, lesson objectives, definitions of key terms, formative assessment for the end of the lesson, explanation of alignments to state learning standards, a link to guides for relevant instructional routines, and a packet of student-facing materials. There were no descriptions of what teachers should do or say, and there was no explicit scripting of teacher talk.

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90 Staff at Novel framed these routines as an educative feature. Thus, I discuss them in more detail below in the section on educativeness.
The choice to write lesson plans with no scripting at all represented a different solution to the same perceived problem that staff at Denizen were working to address—teachers printing and using instructional materials without reflection. A leader at Novel described how they hoped teachers would use (and not use) their instructional materials:

We don't want anybody to take it wholesale, print it out, and use it. I think that's a huge mistake. I think they will be way behind in their pacing if they use everything that is in the curriculum. It needs to be teacher-activated. The curriculum needs to be manipulated to fit teachers' style and what their goals are with their students. This person further explained that the way the teacher uses the curriculum should reflect their students. Like staff at Denizen, this person wanted Novel’s curricula to be “foundational” (i.e. to serve as a starting point for instructional preparation, not as a replacement).

In contrast to social studies, science curriculum writers at Novel had a more specified vision of what a foundational set of instructional materials should look. As in social studies, the science plans included unit questions, driving questions for each lesson, goals for student learning, standards alignment, key terms, links to guides to instructional routines, formative assessments, and student-facing materials. However, these plans also included descriptive scripting that explained lesson activities and limited explicit scripting that gave teachers exemplar phrasing. Unfortunately, there was no direct explanation of this variation between science and social studies in my data.

Comparison of Specificity. As illustrated in the previous two sections, the instructional materials within Denizen’s IGI were of higher specificity than those within Metro’s. At Denizen, most staff (with the exception of the elementary specialists) were working to decrease the level of specificity. In contrast, Metro was increasing its specificity with its new algebra program.
Figure 6.2 below presents a visual representation of the network’s relative positions on the continuum of specificity and the direction of their movement.

**Figure 6.7**

*Trends in IGI Specificity at Denizen and Metro*

Note. The dashed arrows represent change over time. The position of each network is relative to the other, not to the poles of the continuum.

These trends reflected network stakeholders’ assumptions about teacher knowledge, authority, and autonomy. I will discuss these later in the chapter. Prior to that, I analyze power and educativeness within each network’s IGI.

**Power**

As discussed in Chapter Three, the degree of (intended) power associated with IGI implementation is a function of the extent to which networks mandate that teachers follow instructional guidance, monitor teacher compliance, and use policy tools (e.g., incentives, sanctions, threats, rewards, high stakes, etc.) to encourage compliance.

**Power in Denizen’s IGI.** The extent of network power behind Denizen’s IGI was relatively high. In subject areas and grade levels with lead plans, curriculum specialists expected most teachers to adhere to the plans. Some aspects of implementation were mandatory, but others were not. As one specialist explained:
There are certain non-negotiables. Like objectives, assessments, those do not change. Because those are put into place for the purpose of not just for Common Core but our expectations in keeping the rigor high. How [teachers] get there depends on how their students are, what their students’ needs are.

The instructional team at the network office expected that teachers would follow the unit plans, pacing guide, and administer shared assessments, but there was flexibility beyond that. As another curriculum specialist explained: “There’s not an expectation that you take the plans, you teach them exactly as is.” In addition, there was a desire for some teachers to adapt lessons to some degree to align with local circumstances. (Data presented earlier have shown this as well.).

As shown in Chapter Five, most teachers at Denizen were subject to relatively intense scrutiny of their practice. They submitted lesson plans and evidence of intellectual preparation to their coaches weekly, and coaches observed teachers and gave feedback frequently. For new or struggling teachers, this was as many as several times per week, often involving videotaping and video playback. As the instructional team at the network hub shifted to a more coaching-intensive model of school support, the degree of IGI monitoring was set to increase more.

Salary increases tied to teacher performance evaluations, based in part on growth in students’ test scores, functioned as both incentive and sanction at Denizen. In addition, if a curriculum specialist felt a teacher was not adhering to the lead plans as much as required, that specialist could refer the issue to the teacher’s school leader (who had formal power to discipline teachers using measures such as formal warnings of possible termination and performance improvement plans). Table 6.8 below summarizes the strategies Denizen’s staff used to assert the power of its IGI.
Table 6.8

*Power in Denizen’s IGI*

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Denizen’s use of strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandate</td>
<td>Some aspects of lesson plan implementation non-negotiable, variation in extent of mandate across teachers, subject areas, and grade levels</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Frequent observation, use of video in observations, submission of lesson plans and evidence of intellectual preparation to school leaders, analysis of assessment data</td>
</tr>
<tr>
<td>Incentives</td>
<td>Salary tied to performance evaluation</td>
</tr>
<tr>
<td>Sanctions</td>
<td>Salary tied to performance evaluation, referral of compliance problems to school leaders for disciplinary action</td>
</tr>
</tbody>
</table>

**Power in Metro’s IGI.** The extent of power behind the IGI at Metro was significantly lower than at Denizen for multiple reasons. First, Metro’s environmental position made it very difficult to mandate anything, even if network leaders wanted to do so. As described in Chapter Five, the conditions of implementation at Metro were more relaxed than at Denizen, with schools and teachers opting to participate in pilots of curricular programs (e.g., Jump Math, Metro Algebra) or voluntarily adopting recommended curricula (i.e., Novel’s). There was no guidance designed to restrict the simultaneous adoption of other materials or to ensure fidelity to a particular instructional program.

Similar to Denizen’s staff, instructional support personnel at Novel wanted teachers to follow the suggested pacing in their science and social studies materials. As one explained, if
teachers followed the pacing guide, then the network could “do the pre- and post- test for each unit.” However, following the pacing was not “non-negotiable” like it was at Denizen. Hypothetically, if any teacher at Metro using Novel’s science and social studies curricula received a mandate to implement the plans with fidelity, that mandate did not come from Metro or from Novel; such a mandate would have come from the superintendent or a school principal.

Similarly, there was no mandate attached to attendance at Novel professional development workshop or meetings of Metro’s professional learning communities. Even if it had been possible, network staff would likely have avoided mandating attendance. For example, when asked whether they required teachers to attend professional development, an instructional coach at Novel said:

No. We've actually made it really clear that this is not something that you need to be forcing your teachers to go to, this is something that if they are interested and if they feel it's going to help their practice then let's do it.

This was an essential part of the organizational strategy. As another professional development planner stated: “We know that compliance-based structures almost never work.” This said, low attendance at professional learning events was a concern mentioned by leaders at Metro and Novel. One thing Metro staff did instead of mandating was “volun-telling.” This meant leveraging relationships and using persuasion to garner participation. For example, the director of Metro’s instructional team described specific school principals being “volun-told” to lead a segment of the meeting of principals’ PLC. This reluctance to mandate likely reflects the realities of the traditional public sector in New York City. The union contract gave teachers ultimate decision rights over lesson plan materials and contents, which inhibited the ability of affinity partner organizations (e.g., Metro and Novel) to mandate teachers use particular materials or to
enforce mandates with sanctions (United Federation of Teachers, 2020, February 26). This limitation also applied to school principals.

Monitoring structures at Metro included monthly coaching for participants in particular programs, analysis of assessment data in advance of goal-setting meeting with principals, and intervisitations (as facilitators of the instructional rounds process, staff from the network office accompanied principals on their visits to other schools). Overall, monitoring structures at Metro did not represent the same degree of network power as Denizen’s. Points of monitoring were considerably less frequent (e.g., monthly coaching instead of weekly), less intense (e.g., no use of video), and had lower stakes (e.g., visits were not part of formal accountability structure). Since Metro was not involved in giving performance ratings to principals or teachers, incentives and sanctions within its IGI also had lower stakes. Incentives for participating in PLCs, for example, included coffee and bagels, time to grapple with big issues like testing and equity, and a sense of professional community. There were no sanctions for not participating, although schools that did not uphold their end of the “handshake” were sometimes counseled out of participating in particular programs. Table 6.9 offers a summary of sources of network power within Metro’s IGI.

**Table 6.9**

*Power in Metro’s IGI*

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Metro’s use of strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandate</td>
<td>Voluntary, opt-in, volun-“told”</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Monthly coaching, analysis of assessment data, intervisitations (instructional rounds)</td>
</tr>
<tr>
<td>Incentives</td>
<td>Coffee and bagels, time to grapple with issues, professional community</td>
</tr>
</tbody>
</table>
Sanctions Counseling school leaders out of opting into a program, no teacher-level sanctions

Comparison of Power. Analysis of the use of mandates, monitoring, incentives, and sanctions for IGI implementation at Denizen and Metro showed a considerably stronger degree of network power behind the implementation of Denizen’s IGI. Differences in the extent of mandates and monitoring across Metro and Denizen stemmed largely from sectoral differences between charter and affinity networks operating in NYC. As shown in Figure 6.3, charter networks like Denizen were responsible for both support and accountability. Affinity partner organizations were responsible for school support, but school-level accountability was the responsibility of superintendents. (Teacher-level accountability was in the hands of school principals tasked with implementing the state-wide teacher evaluation policy, Advance.)

Figure 6.8

Accountability and Support across Sectors

Note. Solid arrows represent accountability. Dashed arrows represent support.

Recall from Chapter Three that a stronger mandate (broadly construed) was associated with more network power while a weaker mandate located more power at the teacher-level. At
the close of data collection, Metro began to assert a bit more power through its shift to a more programmatic structure (described in Chapter Five). Instead of responding to every principal request for support like short-order cooks, Metro staff referred principals to its menu of support programs and encouraged them to opt-in to a program matching their school’s needs.\(^9\) However, Metro’s position within a large local education authority like NYCDOE constrained its power. In contrast, Denizen had no immediate plans for changing its mandate and monitoring practices. Its insulated position in the charter sector gave it wider latitude for the exercise of power. Figure 6.4 below illustrates the relative power of the IGIs at Metro and Denizen.

**Figure 6.9**

*Trends in IGI Power at Denizen and Metro*

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Note. I use the term “mandate” in the figure for the sake of simplicity. The dashed arrow represents change over time. The position of each network is relative to the other, not to the poles of the continuum.

**Intersection of Specificity and Power.** By looking at the intersection of trends in specificity and power, I was able to examine the extent to which the IGIs at Denizen and Metro were prescriptive or discretionary. As shown in Figure 6.5, Metro’s combination of limited

\(^9\) It is not clear that this counts as an instance of mandate, monitoring, incentives, or sanctions. Nonetheless, the network was asserting power by influencing principal’s activities.
specificity and little to no mandates made its IGI relatively discretionary. Denizen’s combination of highly-specified instructional materials and contingent mandates made its IGI relatively prescriptive.

**Figure 6.10**

*Intersection of Specificity and Power within Denizen and Metro’s IGIs*

*Note.* The dashed arrows represent change over time. The position of each network is relative to the other, not to the poles of the continuum.

The arrows on Figure 6.5 represent changes in specificity and power over the period of data collection. Metro began increasing the specificity of its instructional materials in mathematics, and its shift to a more programmatic model of support slightly increased its power relative to the power of teachers across its schools. This marked a small shift toward less flexibility in its IGI.
At Denizen, network leaders moved to make its IGI less specified. Although there were no planned changes in the extent of implementation mandate and monitoring, this nonetheless represented a shift toward being less prescriptive.\textsuperscript{92} Analysis of the implicit conceptions of teachers’ work behind these dimensions of the IGIs is in a later section of this chapter.

**Educativeness**

The dimension of educativeness captures the extent to which IGI designers intend for the use of instructional materials to contribute to adult learning. An educative design for a lesson plan may include features such as background information, illustrative examples, contingency scripts, pedagogical options, or instructional routines (see Table 3.6 for definitions). In this section, I analyze the extent of educative design in the instructional materials provided by (or recommended) by Denizen and Metro.

**Educativeness in Denizen’s IGI.** Across many informants, particularly those who favored explicit scripting (described in the specificity section above), there was a sense that highly-specified plans that included scripting (descriptive and/or explicit) could be educative for teachers. As one curriculum specialist said: “It just helps them build habits of strong lessons.”

In terms of other educative features, however, analysis of commercially-produced lesson plans (i.e., Ready and EngageNY) and stakeholders’ descriptions of the lead plans revealed wide variation in their use across grade levels and subject areas. Table 6.10 below summarizes this variation.

\textsuperscript{92} These findings indicate that the early impressions of the IGIs used to select these cases for comparison were correct.
As shown in Table 6.10 above, there was no subject area for which lesson plans at all grade levels used the same constellation of educative features. Illustrative examples were the only educative feature that was used across all subject areas at every grade level (for which the network provided lesson plans). These examples were samples of explicit scripts that teachers could choose to use or not use. As described earlier, however, outside of ELA, these were included sparingly at the middle and high school levels.

The inclusion of background information varied across subject areas. For example, the EngageNY math curriculum used in Denizen elementary schools included notes about how particular activities prepared students for learning upcoming concepts. The network-written
materials for Grades 6, 7, and 8 included the same type of notes but with a greater level of detail. A member of the math team described the background information they provided to teachers:

   It’s a separate document that's teacher-facing commentary that goes more in-depth on how you can explain the topic in a meaningful way. There's a background section to help them understand what kids have learned about that topic in the past, key take-aways, commentary to help them tie the topic into topics they've covered in previous units, how they can foreshadow material in upcoming units, and how they can really make the concept meaningful beyond just, “Here's the rule. Memorize it. Do it this way because I told you.”

This was the most robust approach to background knowledge across subject areas. The specialist for elementary science and social studies also thought it was essential to include background information. This person included a lot of information, but not quite as much detail as the math specialists. As they described:

   Anytime I ask something of kids, I always give that context for teachers. At elementary level, our teachers teach everything. Part of what I want is to build that knowledge for teachers, so that any lesson they're teaching they feel comfortable with. All of my lessons come with a unit plan which gives the provided background knowledge.

This person thought content knowledge was particularly important at the elementary level.

   Similarly, the specialists for middle and high school science and social studies had a minimal approach to background information. One of these specialists thought content learning was extremely important (more than any other informant at Denizen). This person included a bit of background information about how events in history connected to one another, but they declined to include the answers to content questions in their instructional materials:
I purposely don't give them the answers because this is my push to, if you don't know something, read the documents and experience the lesson from the students' perspective so that you can think through the idealized answers, and if you don't know something, this is where you go research or ask questions.

This specialist further explained their perception that teachers who received the answers did not complete sufficient intellectual preparation. The new leader of the curriculum team echoed this concern about supporting teachers too much. This person explained what they thought the role of the curriculum specialist should be: “I'm here to help you, but you need to do all that thinking of what is this lesson, why is it important, how do pieces fit together, all of that.” Despite this statement, instructional materials in every subject area other than middle and high school social studies included answers to sample teacher questions. Thus, while some specialists thought providing background information was an essential component of helping teachers intellectually prepare for teaching a lesson or unit, at least two informants worried that including too much would enable teachers to avoid engaging with content prior to teaching.

Approaches to building intentional flexibility into plans varied greatly across Denizen’s IGI as well. Intentional flexibility can emerge from the use of contingency scripts (i.e., options for changing pacing or differentiating instruction based on student performance) and the use of pedagogical options (i.e., banks or menus of texts or activities from which teachers can choose). At one end of the spectrum, in elementary and middle school ELA, the specialists reported making extensive use of these features. One described including banks of texts as a way to give teachers choices: “I try to put thematically aligned non-fiction or poetry into that unit so the teacher can then select from those texts and begin their own classes.” This specialist also described using contingency scripts for pacing and differentiation:
We do build in some flex days into the calendar, which are, you know if you're a teacher who is struggling a little bit, or your kids just need a little more time with this thing because that's where they are, then you can use those days to catch up. Or if you are where you need to be in the calendar, there is an additional resources folder for each unit. They paired these resources for potential contingencies with detailed guidance about when to use them. As the other ELA specialist described:

We give a lot of: “If your scholars are doing this, this is the way to coach them.” Or: “If you notice this, this is what you could do… If scholars are ready, this is where you can make this more advanced.”

The two ELA specialists gave a couple of reasons for structuring their lead plans in what they called a “choose your own adventure” format. One said this structure helped them encourage teachers “to make modifications based on the needs of the class” and gave the teachers the support they needed to know how to do that. They also thought that contingency scripts supported newer teachers:

If you are a new teacher, you might want to do guided reading the entire time just because it's easier to manage. When you're a more experienced teacher, we try to suggest literature circles or different ways that you can boost scholars based on your comfort level.

These curriculum specialists were essentially using contingency scripts and pedagogical options to differentiate the difficulty of lesson execution for teachers with varying levels of confidence. Two commercially-produced programs in use at Denizen, Engage and Ready, also included this kind of scripting. Specifically, these programs used call-out boxes to give differentiation suggestions for students with disabilities (SWD) and students learning English as a new language.
Notably, this was an instance in which educative features explicitly aimed to put teachers’ thinking in conversation with some salient aspect of students’ background and foster consideration of techniques for bridging instruction to student’s particular needs. However, this guidance was necessarily generic. Within a single classroom, there is wide variation in the background knowledge and experience of students, even when they fall into the same broad category (e.g., SWD). Thus, the use of contingency scripts and pedagogical options fell short of replacing the need for teachers to engage in what Pallas and Neumann (2019) call surfacing.

Surfacing is a process of “drawing out what students know already—culturally, personally, and academically” in order to “create a bridge to understanding subject-matter concepts” (Pallas & Neumann, 2019, p. 62). Such skilled practice depends on teachers’ knowledge of their individual students, which is a dimension of pedagogical content knowledge. Educative features and approaches to scripting in the lesson plans could potentially support teachers in thinking about differentiation, but not in cultivating the knowledge of particular learners upon which successful differentiation depends.

Denizen’s math team also used pedagogical options for its lead plans for Grade 6 through Grade 8. As described earlier, these included: banks of Do Now’s, formative assessments, and sample problems. The desire for teachers to modify plans to meet the needs of their students was shared across all members the math and ELA teams. This structure served that interest, but it also stemmed from a desire to stop teachers from printing and using lesson plans without intellectually preparing.

In contrast, the plans for middle and high school science did not use either contingency scripts or pedagogical options. Instead, the structure of the plans was relatively rigid. As one curriculum specialist described, the plans laid out: “These are the things that I want [the teacher]
to do in this order.” As I discuss later, this variation reflected differing understandings of the role of the teacher among staff at the Denizen central office. Attending to this variation presents an opportunity to reflect on whether it is an indicator of incoherence in envisioning the role of teachers or whether subject area and grade levels may be salient variables to consider in the design of instructional guidance—there is considerable precedence in the literature for thinking that they may be important (Hopkins & Spillane, 2015; Siskin, 1994).

Overall, the patterns in the use of educative features in Denizen’s instructional materials reflected a belief that elementary teachers, who worked as generalists in self-contained classrooms, needed more support with content knowledge than middle or high school teachers. Also, there was hope among some curriculum specialists that use of pedagogical options could support the development of teachers’ discretionary skills (grounded in PCK), whereas other specialists took a more rigid approach to lesson construction. I examine this disagreement in greater detail in Chapter Seven.

**Educativeness in Metro’s IGI.** Although there was some use of educative features in the lesson plans at Denizen, it was not consistent, and while some curriculum specialists spoke to the potential of these features to aid teacher learning, no one at Denizen used the term “educative.” In contrast, staff at Novel responsible for the design of high school science and social studies curricula (which were part of Metro’s IGI) explicitly used the term “educative.” For example, in response to a broad question about the intent of curricular design, the director of Novel’s instructional team defined “the notion of an educative curriculum” and described it in detail, giving a definition consistent with the academic literature. This leader referred to “an educative
curriculum group” within their team, which was responsible for addressing the educativeness of curricular materials in order to provide “scaffolding”\(^{93}\) for teachers.

Thus, the educative features of Metro’s instructional materials were largely in science and social studies, not only because Novel designed these materials but also because they did not provide many materials in other content areas or grade levels.\(^{94}\) Table 6.11 below summarizes the extent to which there were educative features in its instructional materials.

**Table 6.11**

*Educativeness in Metro’s Instructional Materials*

<table>
<thead>
<tr>
<th></th>
<th>ELA</th>
<th>Mathematics</th>
<th>Science</th>
<th>Social Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background information</td>
<td>n/a</td>
<td>M(^{-}), H(^{ND})</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Illustrative examples</td>
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<td>M(^{P}), H(^{ND})</td>
<td>H-</td>
<td>--</td>
</tr>
<tr>
<td>Contingency scripts</td>
<td>n/a</td>
<td>M(^{P}), H(^{ND})</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Pedagogical options</td>
<td>n/a</td>
<td>H(^{9})</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Instructional routines</td>
<td>n/a</td>
<td>H(^{9})</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Absence of educative features</td>
<td>n/a</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>No lesson plans provided</td>
<td>M, H</td>
<td>H(^{10,11,12})</td>
<td>M</td>
<td>M</td>
</tr>
</tbody>
</table>

*Note.* Metro did not have any elementary schools. M = Middle grades, H = High school grades. Grade levels shown in subscript. n/a = Not applicable, -- = None, X- = To a limited extent

\(^{93}\) Scaffolding reforms to temporary support that helps learner advance their understanding and skills (Bruner, 1978). As learners become more proficient and more independent, teachers remove the scaffolding.

\(^{94}\) Note that the wide variety of instructional programs used across Metro’s schools (see Table 5.5) was not under analysis here. I only considered instructional materials created by or recommended by the network hub as part of the network-level IGI.
For the limited number of subject areas and grade levels in which Metro provided or recommended instructional materials, there was variation in the presence of educative features. For example, Jump Math, which was being piloted in one only school, had limited background information. Science and social studies lessons written by Novel had no background information included; unit plans included a list of “big ideas” that students needed to understand, but no information beyond that.

In terms of contingency scripts, Jump Math lesson plans included extensions for teachers who had extra time or advanced students. Unlike EngageNY, however, there was no guidance about adapting lessons for students who were learning English as a New Language (ENL) or who had other needs. The plans also did not contain guidance for managing potential misconceptions of the type included in Denizen’s ELA plans.

Novel’s science and social studies curriculum also employed contingency scripting. All units and lessons included guidance about flexible pacing. Although the entire framework for Novel’s curricula was flexible, I did not count the lesson plans as having pedagogical options because there was not a menu of activities or texts for plugging into particular lessons with particular objectives. Jump Math was similar.

This analysis showed that Novel’s conception of educative design focused on the development and exposition of instructional routines. The perceived value of these routines was twofold. First, staff thought routines “lowered cognitive demand” for teachers by reducing planning time. Second, staff saw the routines as tools for teacher learning. As one person explained, this “created predictability” and allowed for “a progression and a clear learning arc”

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95 This was a list of prior knowledge needed for success in each new lesson. There was no explanation of content knowledge for teachers.
for teachers. These understandings of how routines impact the work of teaching were consistent with the findings of empirical academic research that has shown how routines can simplify the complex work of teaching (e.g., Yinger, 1979) and help novices learn to implement more ambitious instruction (e.g., Lampert, Beasley, Ghousseini, Kazemi, & Franke, 2010). Cognitive psychologists Leinhardt and Greeno (1986) explained how this works:

A characteristic of skilled performance is that many component actions are performed with little effort because they have become automatic through practice. We conclude that skilled teachers have a large repertoire of activities that they perform fluently. We refer to these activities as routines… Routines play an important role in skilled performances because they allow relatively low-level activities to be carried out efficiently, without diverting significant mental resources from the more general and substantive activities and goals of teaching. Thus, routines reduce cognitive load and expand the teacher's facility to deal with unpredictable elements of a task (p. 76).

The consistency alignment of academic literature with Novel’s descriptions of educative curriculum and instructional routines suggests that their team has engaged with research in planning their IGI. Additional mentions of research in other contexts corroborate this suspicion. It is interesting, therefore, that the network’s instructional materials do not uniformly incorporate other types of educative features.

Comparison of Educativeness. Given stakeholders’ emphasis on educativeness at Novel in interviews, I expected the results of document analysis to show that the instructional materials in Metro’s IGI (which included Novel’s curricula) had more educative features. However, after scanning the curricular samples to which I had access and coding descriptions of lesson plan structure across interviews, it was unclear that one network’s instructional materials were more educative than the other’s. If one accounted for the greater provision of instructional materials across subject area and grade levels at Denizen, then it would be fair to say that its materials were more educative (since absent materials cannot be educative). However, given that I was not able to triangulate my findings from the interviews against analysis of samples of Denizen’s lead
plans or Metro Algebra’s plans, I refrain from claiming that one IGI was more educative than the other.

In terms of trends in educativeness, efforts toward expanding the use of educative features in instructional materials seemed to be on hold at Metro, Novel, and Denizen. As described early in Chapter Five, curriculum specialists at Denizen wanted to continue the revision of the materials. In every subject area and grade level, these revisions included addition or expansion of at least one type of educative feature. It was unclear, however, how the shift to content-agnostic coaching would affect these specialists’ goals for the revision of instructional materials. At Metro, its expansion to writing instructional materials would likely be limited by its capacity. Discussion of plans for building out the algebra materials through the pilot year did not include mention of educative features. It also seemed like Metro’s network leaders wanted to evaluate the algebra pilot before developing materials in other subject areas. The network leader, for example, was much more enthusiastic about expanding partnerships for instructional materials with external organizations and for disseminating best practices Metro had identified through the development and pilot of a curriculum for social and emotional learning. Novel seemed satisfied with the level of educativeness in its materials. Future plans for its materials centered around “building cohesion” by unifying formatting across subject areas and grade levels. Leaders at Novel hoped more consistent formatting would help school administrators better support their teachers with curriculum implementation.

**Summary of Four-dimensional IGI Analysis**

As shown in the previous four sections, Denizen’s IGI was more aligned and more prescriptive than Metro’s. Denizen’s IGI also had a stronger degree of power—the network

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96 Analysis of this program was outside the scope of the dissertation.
attached a stronger mandate to the implementation of its instructional materials and monitored teacher practice much more closely than Metro. Both Novel and Denizen included educative features in the design of their lesson plans. Denizen relied more heavily on the inclusion of background knowledge and contingent scripting. Novel emphasized instructional routines. Table 6.12 below summarizes these findings.

Table 6.12

Relative Positions on IGI Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Denizen</th>
<th>Metro</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alignment</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Specificity</td>
<td>++</td>
<td>-</td>
</tr>
<tr>
<td>Power</td>
<td>++</td>
<td>-</td>
</tr>
<tr>
<td>Educativeness</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

Implications for the Framing of Teachers’ Work

In the remainder of this chapter, I discuss the implications of the findings of the four-dimensional analysis for the framing of teachers’ work in terms of knowledge, authority, and autonomy. Data around each of the four dimensions (largely grounded in the characteristics of the IGI elements) offer clues to the conceptions of teacher professionalism operating at each network.
Alignment and the Framing of Teachers’ Work

The implications of alignment for the framing of professionalism in teachers’ work were less clear than they were for other dimensions of the IGI, particularly specificity and power.

Alignment and Knowledge. State learning standards were at the heart of alignment efforts at Denizen and Metro. As described in this chapter, Denizen and Metro used common instructional frameworks (i.e., CCLS and NGSS) in designing their IGIs. In addition, the Novel science and social studies curricula recommended by Metro aligned to New York State’s frameworks for these subjects, which outlined unifying disciplinary themes, disciplinary practices, and key content. At Denizen, curriculum specialists did not mention these frameworks, but they intentionally aligned their instructional materials to New York State’s standardized tests, which were aligned to these frameworks. This alignment demarcated which types of teacher knowledge were most important at each network.

These contents of these frameworks constitute epistemologies of school knowledge—what students need to know and be able to do. In turn, this epistemology reflects a conception of what teachers should know. The common emphasis on state learning standards across the networks represented shared attention to content knowledge. Although the recent revisions of these instructional frameworks have moved to incorporate more process skills and big ideas (and fewer factual minutiae), process skills and big ideas nonetheless fall into the category of content knowledge (as opposed to pedagogical knowledge or pedagogical content knowledge). Thinking “properly” about “content knowledge requires going beyond knowledge of the facts or concepts of a domain” (Shulman, 1986, p. 9). The scope of content knowledge includes understanding the structure of knowledge in that domain (i.e., how ideas relate to one another), as well as:

…the principles of inquiry that help answer two kinds of questions in each field: What
are the important ideas and skills in this domain? and How are new ideas added and
deficient ones dropped by those who produce knowledge in this area? (Shulman, 1987,
p. 9)
The “big ideas” in the New York State frameworks for P-12 science and social studies constitute sets of answers to Shulman’s first question. Similarly, the disciplinary practices and modes of disciplinary thinking included in the frameworks represent the subject-specific techniques for inquiry to which Shulman’s second question refers. The same is true for the problem-solving strategies and habits of mathematical thinking outlined in the CCLS and the scientific inquiry skills in the NGSS. According to Shulman (1987), all of these are part of content knowledge. Metro and Novel’s to alignment of their instructional materials, assessments, and professional learning to these frameworks necessarily emphasized this content knowledge.

At Metro, staff had recently embraced a shift towards content knowledge in the aligned elements of its IGI after several years of teaching pedagogy in professional learning with limited results. Thus, Metro’s leaders chose to focus on alignment between instructional frameworks and professional learning, even in PL that was agnostic to instructional materials. As one network leader said: “We can teach pedagogy until the cows come home, but if there's not good planning behind it, and there's not alignment to the [CCLS], then it doesn't move—it's not high leverage.”

The network still believed that pedagogical knowledge was important, though. We observed efforts to align professional learning with Danielson’s content-agnostic Framework for Teaching, at Metro and Novel. Similarly, Denizen’s alignment around the generic taxonomy of teacher moves in Lemov’s Teach Like a Champion represented an emphasis on pedagogical knowledge. Both networks’ alignment around what Shulman (1987) would have called “generic
principles of effective teaching” had the advantage of “simplify[ing] the otherwise outrageously complex activity of teaching” (p. 10-11).

Notably, there was no significant alignment around guidance related to pedagogical content knowledge within either network’s IGI.

Alignment and Authority. The alignment of each network’s IGI to state learning standards (and assessments based on those standards) had implications for the locus of authority over teacher practice. The literature on the classic and new professionalisms (outlined in Chapter Two) describes a spectrum of authority ranging from occupational authority to managerial authority. In considering the central role of learning standards and the state accountability framework in each network’s IGI, the concept of public authority became relevant as well.

The learning standards were an instance in which all three types of authority blended. For example, the process that New York State used to develop the new social studies framework involved the state government (i.e., managerial authority), its Content Advisory Panel (consisting of 19 educators, 11 of whom were teaching K-12 social studies) (i.e., occupational authority), and public review (i.e., public authority). The state’s website claimed that the content advisors, who were current practitioners and experts in social studies education, had played “an integral role” in developing the standards (New York State Department of Education (NYSED), 2013, December 17b). It is impossible to assess the validity of this claim (within the scope of this study), but it is verifiable that the Board of Regents consulted the content advisors and the public five times during an iterative review process spanning several years (New York State Department of Education (NYSED), 2013, December 17a). The state government followed a similar process for science (New York State Department of Education (NYSED), n.d.). Of the three types of authority recognized in this process, however, the authority of the state was clearly
dominant in determining what students should learn (and therefore, what teachers should teach). A small number of teachers played what appeared to have been a minimal role in the process. More importantly, these 11 teachers were not chosen representatives of any occupational body. Additionally, teachers did not lead this process.

There were slight differences in alignment, however. At Denizen, systems for instructional oversight also aligned with the state standards and state standardized testing. This alignment lessened authority at the teacher level and legitimized the authority of the state. In contrast, the UFT’s union contract buffered teachers from the authority of the state somewhat, but giving protecting teachers’ final decision rights over lesson plan contents (United Federation of Teachers, 2020, February 26). This gave them more latitude in relaxing alignment between instructional materials and other areas of the IGI. This second difference stemmed from Metro’s sectoral position.

**Alignment and Autonomy.** As a result of these patterns in the locus of authority over practice, the IGI at Denizen implied a more restricted vision of teacher autonomy. In contrast, the fragmented, less-aligned IGI facing teachers in Metro’s schools, produced by intersecting guidance from multiple sources, likely gave Metro’s teachers relatively more autonomy.

Table 6.13 below summarizes these implications of patterns in IGI alignment for the framing of teacher knowledge, authority, and autonomy in teachers’ work. Differences across Denizen and Metro were less pronounced than I expected, despite considerable differences in their IGIs and sectoral positions. In large part, similarity here appeared to stem from the power of the state.
Table 6.13

IGI Alignment and the Framing of Teachers’ Work

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Denizen CMO</th>
<th>Metropolitan Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alignment to state standards emphasized content knowledge</td>
<td>Alignment around state standards emphasized content knowledge</td>
</tr>
<tr>
<td>Alignment around Lemov emphasized pedagogical knowledge</td>
<td>Alignment around Danielson emphasized pedagogical knowledge</td>
<td></td>
</tr>
<tr>
<td>Little alignment around PCK</td>
<td>Little alignment around PCK</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Authority</th>
<th>Denizen CMO</th>
<th>Metropolitan Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alignment to state standards reflected blend of managerial, occupational, and public authority over practice</td>
<td>Alignment to state standards reflected blend of managerial, occupational, and public authority over practice</td>
</tr>
<tr>
<td>Occupational authority minimal, but less than at Metro</td>
<td>Occupational authority slightly greater</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Autonomy</th>
<th>Denizen CMO</th>
<th>Metropolitan Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricted autonomy compared to Metro</td>
<td>More autonomy relative to Denizen</td>
<td></td>
</tr>
</tbody>
</table>

Specificity and the Framing of Teachers’ Work

The level of specificity in instructional materials at Denizen and Metro, as well as the nature of that specificity, had more obvious implications for the framing of teachers’ work than did the degree of alignment across the elements of their IGIs.

Specificity and Knowledge. The comments of stakeholders from both networks implied a relationship between specificity and teachers’ pedagogical content knowledge—both groups saw manipulating the extent of specificity in instructional materials as a lever for encouraging teachers to engage with pedagogical content knowledge. However, Denizen’s staff thought
reducing specificity would catalyze pedagogical content thinking while Metro’s staff saw the relationship working in the opposite direction.

As described earlier in this chapter, at Denizen, the majority of the curriculum specialists expressed a concern that too much specificity in instructional materials made it easier for teachers to skip the process of intellectually preparing the network’s lead plans. The network’s definition of this process of intellectual preparation, delineated in a handout collected at a professional learning event, included a multitude of steps. The contents of this guide to intellectual preparation, an instance of sensegiving efforts by Denizen’s network staff, aimed at evoking the desired lesson performance. Interestingly, the steps aligned closely with the types of thinking characteristic of pedagogical content knowledge, suggesting that ideal teaching practice was a skill built on a foundation of PCK. Table 6.14 below illustrates this alignment with some examples taken from Denizen’s intellectual preparation protocol.
### Table 6.14

**Pedagogical Content Knowledge and Intellectual Preparation**

<table>
<thead>
<tr>
<th>Aspects of PCK</th>
<th>Tasks in Denizen’s Intellectual Preparation Protocol</th>
</tr>
</thead>
</table>
| Understanding likely misconceptions and best way to redress them | “Consider what mistakes scholars are likely to make”  
“Annotate for strategies to address anticipated student misconceptions” |
| Considering learners’ diverse interests and abilities, prior knowledge, and preferred cognitive strategies | “Consider prior knowledge necessary to succeed with this topic”  
“Edit the lesson as appropriate for your scholars” |
| Understanding how to maximize comprehensibility | “Identify the portions of the lesson that are essential to scholars achieving the aim”  
“Consider cutting problems or swapping out problems for scaffolding purposes” |

Across the middle and upper grades, staff at Denizen were limiting the extent to which they used explicit scripting in order to reduce the specificity of instructional materials and force teachers to engage more authentically in intellectual prep. In addition, the network had begun doing more professional learning around intellectual preparation, staff were discussing how to streamline guidance and requirements for intellectual preparation across their schools. As shown in Table 6.14, encouragement of IP at Denizen constituted an emphasis on PCK. At the same time, the universal use of descriptive scripting in the lead plans emphasized how lessons should be conducted, essentially specifying the mode of delivery for particular content. This represented an effort to encode PCK in the instructional materials. Recall that encoding is a process of making the knowledge of practice explicit and collectively available by codifying and storing it in
written form (Lam, 2000). It was unclear what the implications of this were, but Lam (2000) argued that “encoded knowledge is inevitably simplified and selective, for it fails to capture and preserve the tacit skills and judgement of individuals” (p. 493). She associated encoded knowledge with scientific management and “machine bureaucracy,” drawing a contrast with “professional bureaucracy,” in which explicit knowledge is embrained within practitioners, which has drawbacks of its own, such as individualism that stifles knowledge sharing and innovation (Lam, 2000).

At Novel, the theory of action undergirding their curriculum development project also involved PCK. Specifically, Novel’s leaders hope that providing teachers with a foundational curriculum would save them time. As the leader of their instructional team explained:

We’d much rather have them spend their time thinking about how to adapt resources to meet their student needs and anticipating students’ work than googling resources or trying to create their own resources. So that's really, I think, the underlying thrust of our work.

Adaptation of materials to meet student needs and anticipation of students’ thinking both fall into the realm of PCK. Novel’s staff hoped that reducing teachers’ need to search or create resources would create space in their schedules to more deeply engage in pedagogical content thinking, such as considering the most appropriate way to differentiate teaching. However, curriculum writers at Metro did not intentionally encode PCK in their science and social studies materials, beyond choosing lesson activities to align with topics.

**Specificity and Authority.** At Denizen, the higher level of specificity across the instructional materials (combined with the greater degree of network power behind its implementation) at Denizen appeared to reflect an implicit assumption that the network had the
authority to determine how teachers should deliver the content outlined by state standards. In contrast, the lower degree of specificity at Metro (combined with voluntarism in its implementation, which reflected a lesser degree of network power) suggested an implicit assumption that authority for the selection of materials and the delivery of instruction rests with schools and teachers. In Chapter Seven, I analyze sensemaking data to further investigate assumptions about authority over practice at each network. I also synthesize clues about conceptions of teacher authority across the dimensions of the IGI.

**Specificity and Autonomy.** At Denizen, the greater degree of specificity (combined with greater power)\(^7\) in its IGI relative to Metro’s framed the role of teaching with less autonomy than did Metro’s. However, as shown earlier in the chapter, several curriculum specialists at Denizen (representing all grade bands) and their new team leader expressed concern about the high level of specificity being too restrictive. This seemed indicative of internal contradiction. For example, one specialist described their rationale for limiting the extent of explicit scripting: “For certain things, I like building a narrative throughout a lesson. That's when I add a script… But generally, I want the teachers to feel like they have some autonomy over how to teach the lesson.” This was the same specialist who described their lesson plans in relatively rigid terms—what to do and in what order. I explore this juxtaposition more in Chapter Seven. Table 6.15 below summarizes clues about the framing of teacher professionalism uncovered by analysis of specificity in the IGIs.

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\(^7\) I found that it was impossible to separate the dimension of specificity from power when discussing authority and autonomy. Thus, the findings in this section and the next represent implications of prescriptiveness versus flexibility. This interaction is something important for me to consider if and when I decide to mobilize this dissertation’s conceptual framework in another research project.
Table 6.15

*IGI Specificity and the Framing of Teachers’ Work*

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Denizen CMO</th>
<th>Metropolitan Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efforts to decrease specificity in middle and high school grades aimed to increase teachers’ IP (i.e., activation of PCK prior to executing a lesson plan)</td>
<td>Specificity in materials created by Novel related to desire to free up intellectual space for teachers to exercise PCK to adapt instructional materials and differentiate their teaching</td>
<td></td>
</tr>
<tr>
<td>Specification of pedagogical guidance emphasized PK</td>
<td>Specification of pedagogical guidance emphasized PK</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Authority</th>
<th>Denizen CMO</th>
<th>Metropolitan Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher level of specificity likely reflects assumption of network authority over practice</td>
<td>Lower specificity likely reflects assumption of school-level authority over practice</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Autonomy</th>
<th>Denizen CMO</th>
<th>Metropolitan Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater level of specificity overall framed teaching with less autonomy</td>
<td>Less specificity framed teaching with more autonomy</td>
<td></td>
</tr>
</tbody>
</table>

The data showed an association between authority and autonomy consistent with the relationship I posited in Chapter Three. Greater network authority over practice was associated with a diminished vision of teacher autonomy (and vice versa).

**Power and the Framing of Teachers’ Work**

As described above, the dimension of power mediated the relationship between specificity, autonomy, and authority. It also had somewhat independent implications for the framing of teachers’ work.

**Power and Knowledge.** As shown earlier, Denizen had a greater degree of network power behind its IGI than did Metro. The relatively strong power behind Denizen’s IGI reinforced its alignment around the state’s learning standards and the generic pedagogical
guidance of Doug Lemov. This further emphasized the importance of teacher CK and PK. At
Metro, there was a similar alignment but less power behind it, so there was less additional
emphasis on the CK and PK outlined by the standards and Danielson (beyond that driven by
alignment efforts). Understanding the relationship between network power and beliefs about
teachers’ levels of knowledge and expertise required substantial analysis of stakeholder
sensemaking. Thus, I address this topic in Chapter Seven.

Power and Authority. The greater use of mandates and scrutiny over practice at Denizen
framed authority over practice as a characteristic of the network. Although network staff wanted
teachers to modify instructional materials to some extent, the frequent observations and coaching
and the high stakes attached to performance ratings indicated that the network was ultimately the
arbiter of what counted as good practice. In contrast, Metro did not mandate uptake of its IGI,
nor did they have any formal role in monitoring or evaluating practice. Organizational capacity
limited informal monitoring. Thus, relative to Denizen, even though Metro (and Novel) shared
ideas about what counted as quality practice through its programs, the networks did not claim
authority over practice. As sensemaking analysis in Chapter Seven reveals, there were
indications that staff at Metro and Novel located authority over practice with teachers. However,
the state accountability apparatus intervened.

Power and Autonomy. The degree of power behind the IGIs also had implications for
teacher autonomy. Namely, teachers at Denizen could earn a limited degree of autonomy, but as
one curriculum specialist explained, “It varie[d] by grade level and school performance to a
certain degree.” In general, staff at the network expected teachers to implement the lead plans,
but high performers had more latitude. As another specialist said, “If you're a high performing
person, then you can change [the lead plans]. However, if you are really struggling, then you
cannot change the curriculum or use something that we don't say will work as well.” (Note that Chapter Seven contains further evidence and discussion of the way teacher autonomy at Denizen was contingent on perceived competence.)

In contrast, the autonomy to flexibly adopt and implement Metro’s instructional materials was not contingent on performance or experience. Flexibility was part of the design. As a Novel leader explained:

It’s central to the philosophy that teachers take what works for them and use it as a tool in their arsenal. That decision is still up to them—what they pick and choose—just like they pick and choose from other resources as well.

Thus, Metro and Novel’s framing of the role of teachers featured a greater level of autonomy than did Denizen’s. Table 6.16 below summarizes findings related to IGI power and the framing of teachers’ work.

**Table 6.16**

*IGI Power and the Framing of Teachers’ Work*

<table>
<thead>
<tr>
<th></th>
<th>Denizen CMO</th>
<th>Metropolitan Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Additional emphasis on content and pedagogical knowledge</td>
<td>Little additional emphasis on CK or PK</td>
</tr>
<tr>
<td>Authority</td>
<td>Greater mandate and scrutiny located authority over practice with network</td>
<td>Lesser scrutiny of practice located authority with teachers</td>
</tr>
<tr>
<td>Autonomy</td>
<td>Flexible implementation contingent on performance framed teaching with less autonomy</td>
<td>Flexibility for all teachers framed teaching with more autonomy</td>
</tr>
</tbody>
</table>
Educativeness and the Framing of Teacher Knowledge

As shown in Table 3.7, I did not posit relationships between the educativeness of IGI materials and conceptions of teachers’ authority or autonomy, and no glaring patterns emerged during data analysis. Thus, in this section, I focus on educativeness and teacher knowledge.

The type and frequency of educative features in the lesson plans provided or recommended by Denizen and Metro had interesting implications for the framing of teacher knowledge. As shown in Tables 6.10 and 6.11, there were notable differences in the inclusion of background information within lesson plans. Namely, Denizen’s lesson plans consistently included more background information. This information included summary of the important concepts in a lesson, as well as how the content within a lesson related to lessons before and after it. Thus, inclusion of this background information necessarily emphasized teacher content knowledge. In addition, the pedagogical options included by the math and ELA teams at Denizen presented teachers with an opportunity to exercise PCK. In contrast, the contingency scripts included in the ELA plans represented encoded PCK.

At Metro, the guidance around discipline-specific inquiry practices that accompanied Novel’s lesson plans emphasized content knowledge, but there was little to no background information. There was some background information in the instructional materials for Jump Math, but Metro was piloting this program in only one middle school at the close of data collection. The flexible pacing built in the Metro Algebra program and Novel’s science and social studies curricula were examples of contingency scripts. These presented teachers at Metro with an opportunity to exercise their pedagogical content knowledge.

In terms of pedagogical knowledge, this knowledge was embedded in IGI frameworks that stood alongside instructional materials. At Denizen, this was its taxonomy of pedagogical
moves derived from Lemov (2015). At Novel, it was an accompanying guide for “accessible planning” designed to meet the needs of ENL students or students with disabilities. This guidance was not tied to particular lessons, however, so I categorized it as generic guidance around pedagogical knowledge. (Notes about adapting lessons for accessibility, like those in Ready Reading and EngageNY’s instructional plans (at Denizen) and in Jump Math’s (at Metro), were categorized as PCK, since they were tied to the content of a particular lesson.)

Table 6.17

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Denizen CMO</th>
<th>Metropolitan Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>CK and PCK encoded in instructional materials to a greater extent</td>
<td>CK and PCK encoded in instructional materials to a lesser extent</td>
<td></td>
</tr>
</tbody>
</table>

Chapter Six Conclusion

Looking across the four dimensions of variation in the IGIs of Metro and Denizen and analyzing implications for the framing of teachers’ work at each network led me to the following conclusions. Denizen encoded teacher knowledge in its instructional materials to a greater degree than did Metro. Encoding at Denizen emphasized all three types of pedagogical knowledge. At Metro, the specificity in instructional plans and frameworks emphasized CK and PK more than PCK.

What this indicated about a dominant logic of teacher professionalism at each network remained unclear without deeper analysis of stakeholder sensemaking.98 These patterns likely

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98 I explore this in Chapter Seven as I engage with stakeholders’ perceptions of teachers’ levels of knowledge and expertise.
reflected implicit assumptions, but possible assumptions were very different. For example, Metro could have encoded less knowledge because of an assumption that teachers already had the requisite knowledge, an assumption that teachers could and should obtain knowledge independently, or an assumption that teachers would acquire needed knowledge from other elements of the IGI (e.g., professional development or coaching). This illustrates the importance of using a conceptual framework that also looked at sensemaking, not just the elements of the IGI themselves. It also showed why it was important to have a methodology that looked across all elements of instructional guidance, not just instructional materials and instructional frameworks.

Overall, the dimensional analysis showed that Denizen’s IGI emphasized managerial authority, while Metro located authority over practice with teachers. However, both IGIs reflected that teachers and schools were subject to state authority. The characteristics of Denizen’s IGI framed the role of teaching with less autonomy than did Metro’s. This more limited autonomy was regulated by managerial authority and contingent upon performance assessments. Thus, authority and autonomy at Denizen seemed to be more representative of the new professionalism, while Metro’s conception of teachers’ role appeared to align more with classic professionalism. These findings remained tentative, however, without further investigation.

In Chapter Seven, I consider these findings and examine additional evidence, focusing on stakeholder sensemaking, in order to draw conclusions.
CHAPTER SEVEN: Conceptions of Professionalism

This chapter addresses the third research question, which asked how the design of each IGI and staff sensemaking regarding that design reflected and reinforced conceptions of teacher knowledge, autonomy, and authority. It also examines the extent to which those conceptions aligned with the logics of classic and new professionalism. Using evidence from instances of sensemaking and sensegiving in the interview and observation data, this chapter details the nature of the implicit logic of professionalism at each network. In addition to highlighting instances of sensemaking and sensegiving, the analysis also attends to stakeholders’ beliefs about teachers, “subject matter, teaching, students, and learning,” which undergird and influence sensemaking activities (Spillane et al., 2002, p. 397).

One advantage of an intensive case study approach is that the depth of data collection allows for within-case comparisons in addition to cross-case comparisons (Swanborn, 2010, p. 243). Comparison of stakeholder perspectives within Denizen and Metro revealed that conceptions of the knowledge base for teaching, the locus of authority over classroom practice, and the ideal degree of teacher autonomy sometimes overlapped and sometimes conflicted. On particular points, there was notable disagreement among stakeholders, particularly within Denizen. In this chapter, I explore these contested points. By exploring areas of contestation, the analysis in this chapter shows how different logics of professionalism can co-exist within the same IGI.

The design of each network’s IGI reflected some of these perspectives but not others. Choices about ongoing (re)design further embedded some of these attitudes in the elements of the IGI. Of course, power dynamics within each organization shaped which beliefs were dominant. Dominant beliefs were more likely to inform IGI design than others. By analyzing
congruence between stakeholder sensemaking and the characteristics of the IGI (outlined in Chapter Five), I was able to identify which beliefs were dominant. Beliefs about teacher knowledge, authority, and autonomy, which were institutionalized in IGI designs, accreted to form an implicit, dominant organizational logic of teacher professionalism at each network. The dominance of certain conceptions of teacher professionalism was a function of power relations. Beliefs about the nature of teachers’ work held by actors with organizational authority were the beliefs that eventually became expressed in a network’s IGI design.

The chapter examines conceptions of teacher knowledge first, followed by authority and then autonomy. Within each section, I start with Denizen, then discuss Metro, and end with a comparative analysis. I consider whether findings corroborate or disconfirm findings from Chapter Six. At the end of the chapter, I summarize my findings about the dominant logics of professionalism at each network.

**Conceptions of Teacher Knowledge**

At Denizen and Metro, sensemaking about teacher knowledge as it related to instructional guidance fell into three major categories: understandings of teachers’ level of knowledge (inferred from appraisals of competence), understandings of the types of knowledge teachers needed in order to be effective in the classroom, and understandings about how teachers learn and what they need to learn.

**Making Sense of Teacher Knowledge at Denizen**

In the sections below, I examine stakeholder sensemaking at Denizen as it related to these three areas of thinking around teacher knowledge, telling a story about how conceptions of teacher knowledge informed: how stakeholders envisioned the role of the network’s highly-specified plans in supporting teacher practice; how they interpreted problems with the
implementation of the network’s lead plans; how the network planned for its shift to more
intensive coaching to address those difficulties; and how some staff members critiqued that plan.

Perceptions of Teacher Knowledge. At Denizen, network leaders saw network-written curricula as a mechanism for quality control that would compensate for the limited knowledge and skills of new teachers. Several used a metaphor of floor and ceiling to discuss the network-developed curricular resources, framing the lead plans as a way to guarantee basic quality. As one leader explained: “At the very least, the materials in front of these scholars will be standards-aligned; they’ll be rigorous… at least there’s a common floor of materials, a common floor of what’s expected in the classroom.” The ceiling referred to how teachers who had mastered the floor could go beyond the lead plans toward more ambitious instruction. Although one informant objected to what they saw as implied simplicity in the term “floor” (preferring the term “foundation”) and disagreed with upper bound implied by the term “ceiling,” this metaphor of floor and ceiling was otherwise pervasive. Many staff members expressed hope that the materials would improve and standardize instruction, raising what they called the “rigor bar” for students across the network.

Thus, developing a floor of highly-specified or “codified” instructional materials was a strategy for controlling instructional quality. Staff at Denizen thought this was especially important for classrooms staffed by novice teachers. As one network leader explained, the goal of the lead plans was to “make sure that if you have a brand-new teacher, new to Denizen or to teaching in general, that we have some kind of control over what the quality of that classroom looks like.” Institutionalizing knowledge by encoding it in instructional materials was a method for quality control.
Another person in leadership explained that Denizen had a lot of early career teachers. For teachers with that degree of experience, this person said the network had found that “the skill set of figuring out what material needs to be taught, in what way, [and] at what rigor level is really challenging” for teachers. Providing the materials was a way to support early career teachers in these areas while they struggled with “cultural management” (i.e., classroom management). A curriculum specialist echoed this, describing the challenge:

You just can’t run a classroom, especially the style of classroom and the level of discipline that’s expected in our schools… that is a whole teaching job in itself it seems. And then to put on top of that the whole spectrum of content. I don’t think any new teacher can parallel process both of those things in a deep and meaningful way and become good at both of them without time. And we have some teachers that are stronger classroom managers and weaker in content, and we have teachers that are stronger in content and weaker classroom managers, but to get a teacher that’s pretty good at both. I don’t know if I can name anyone, let alone a handful of people, who walked in and were able to do that.

There was a consistent concern across informants about the competence of new teachers. This concern stemmed from a sense that the traditional framing of the teacher’s work, which included curriculum development, was too broad to be manageable for novices. It was too difficult for new teachers to have responsibility for managing classrooms (a set of skills rooted in pedagogical knowledge) and deciding the best way to teach content (i.e., curriculum writing, a set of skills rooted in pedagogical content knowledge). Given limited capacity, managing the classroom was the priority, since an orderly environment was a necessary condition for student learning to occur.

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99 Informants most often referenced teachers in their first three years of teaching.

100 Recall from Chapter Three that pedagogical knowledge and content knowledge are necessary but not sufficient conditions for the development of PCK.
Concern among network staff about teachers’ wide range of knowledge and skills was not isolated to the relatively inexperienced teachers. At a network PD, school leaders lamented that teachers “just [did]n’t have the capacity” to plan ambitious instruction. In addition, several stakeholders saw content knowledge as a challenge for most teachers. For example, one math curriculum specialist described observing lessons:

> Sometimes I can see that it's obvious the teacher didn't understand the content, and they were just kind of winging it, or just like I said, going through the lesson as it's written, not connecting it to other content, so whatever was taught before.

Another specialist said something similar about observed issues with practice: “I think a lot of it also is content gap in some areas.” Members of the instructional team responsible for the IGI in other subject areas echoed this.

These observations raised concerns about the content exposure students were getting, especially since the curriculum was explicitly designed to be content heavy. For example, a middle and high school math specialist described how teachers who lacked content knowledge taught the material at a more superficial level:

> They might solve the worksheets or solve the problems that we've presented, and they'll teach it, but that's it. Surface level. They're able to solve the problems, but they don't understand how it works or how it's connected to the other topics within math or subjects outside of math.

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101 Network leadership professed Denizen’s commitment “to a content-rich curriculum.” One high-level leader described the philosophy guiding the design of their instructional materials: “You don’t teach the standards, you teach content to the standards, and there’s this giant misconception, and people are writing reading objectives using standards language, and we’re denying our kids access to rich content.”
Teachers’ perceived lack of content knowledge was problematic in other areas as well. For example, in the elementary grades, where teachers in self-contained classrooms were responsible for all four core content areas, a curriculum advisor described teachers focusing on math and ELA: “Often when I speak to teachers, science and social studies goes by the wayside\textsuperscript{102} because they just don't remember a lot of history or science context themselves.” Many curriculum specialists expressed concerns about teacher content knowledge, and these illustrative examples showed that stakeholders attributed issues with the breadth \textit{and} depth of content instruction in classroom to this perceived problem.

\textbf{Teacher Knowledge and the Lead Plans.} Stopping short of implying that the curriculum should be teacher-proof, members of the network team described the lead plans as a mechanism that could support teachers who lacked experience\textsuperscript{103} and were facing the dual challenges of classroom management and instructional planning. For example, one specialist described their hope that the highly-specified lessons they wrote would “give [teachers] a leg up on some things that may have otherwise taken them a couple years to figure” out. Another specialist said something similar: “I want to make my lessons so clear that anyone who picks them up could teach them. Because you don't know the level of teacher experience going into it.” These comments were representative of sentiments across informants, including a school principal and an assistant principal. Thus, there was relative consensus at Denizen that early career teachers did not yet have the skills needed to be an effective lesson planner.

\textsuperscript{102} This observation is consistent with what other scholars have found about content knowledge and curriculum implementation. For example, See et al. (2017) found that some teachers looked at content-heavy curriculum and said, “I don’t know anything about this, and I don’t have time to learn it,” before brushing it aside (p. 387).

\textsuperscript{103} Stakeholders largely attributed the relatively inexperienced workforce to teacher turnover. As discussed at the end of Chapter Five, the desire to institutionalize practice in the face of turnover was a primary impetus for the network’s project to develop daily lead plans.
The lead plans were a sensegiving tool designed to account for perceived gaps in teacher competence. As one leader described, the theory of action behind the curriculum development held that removing the need to focus on content would improve teachers’ success in delivering instruction as intended:

We found that by telling teachers, “Use this really well-thought-out lesson, obviously you need to take it, you need to internalize it, you need to make the changes that are right for your kids. It's not like you read off a script, which won't work.” By doing that, we free them up to focus on the class implementation and be more successful.

The goal of focusing on implementation represented an emphasis on teaching skills rooted in pedagogical knowledge. The lead plans removed the task of matching pedagogical strategies to content, which requires skills rooted in PCK, from teachers’ responsibilities. Curriculum specialists matched tasks to content in their planning, encoding their own PCK in the plans. In turn, teachers’ occupational role became narrower. This narrowed role, in which teachers concentrated on managing and monitoring instruction as they delivered lesson plans written by others (thus engaging less with subject area content) was consistent with the new professionalism (Carlgren, Klette, Mýrdal, Schnack, & Simola, 2006; Carlson, 1987; Gray & Whitty, 2010; L. Jones & Moore, 1993; Sinclair et al., 1996; Singh, 2002).

Notably, the network’s attention to matching content to pedagogy overlooked a critical domain of pedagogical content knowledge—matching instruction to students’ prior knowledge, including their cultural, academic, and personal knowledge (Pallas & Neumann, 2019). After surfacing that knowledge, skilled teachers engage in a process of “navigating” in which they design and deliver instruction that brings course content and student knowledge together (Pallas & Neumann, 2019). This delivery is flexible and discretionary, requiring extensive interaction
with students and ongoing assessment. Navigational skills depend on teachers having a strong foundation of pedagogical content knowledge (Pallas & Neumann, 2019). The specificity in Denizen’s instructional materials, which focused on linking teacher moves, classroom activities, and concepts, de-centered the role of students’ prior knowledge in instruction. This may have reflected an implicit assumption of a relatively uniform landscape of student prior knowledge; alternatively, it could reflect the inherent difficulty of encoding such detailed and individualized knowledge.

That said, the leader quoted above did place some value on navigational skills rooted in PCK when acknowledging that teachers should “internalize” the lesson and “make the changes” that were right for their students. However, it appeared that Denizen’s work in recent years on codifying highly-specified materials may have inadvertently undermined the aspiration for teachers to practice those skills. As a member of the math team at the network office shared:

It's kind of the danger of providing materials. Once you give a teacher a lesson, they think they can just use it, but if you didn't write the lesson, then you don't have it internalized in a way that really allows you to teach it in a meaningful way. You don't know why this part is in front of this part, you can't make the connections through all of the parts of the lesson, if you didn't write it and you haven't spent a good amount of time thinking through it or reading the commentary. It's dumb the way it's done.

This view that highly-specified materials were hindering teacher understanding of lesson materials had informed this stakeholder’s decision to reduce explicit scripting in the lesson plans they wrote and move toward a resource bank model of instructional guidance.
In contrast, an elementary curriculum specialist suggested that the lead plans could also support teachers with the content knowledge they needed. This person intentionally incorporated a lot content knowledge into the plans they revised:

I feel like the best thing we can give teachers is the knowledge of the subject because they already have the skillset to execute them well. This idea of “Because you're smart, you can teach anything,” it’s just so fundamentally false.

Another specialist who intentionally limited background information in their plans (in order to force teachers to “research” topics themselves) still thought that “the lessons make [the content] pretty clear, and [a teacher] could figure it out.” Thus, even the members of the curriculum team most concerned with content knowledge saw the lead plans as a device for embedding knowledge and expertise in the IGI. Overall, the dominant stance toward instructional materials at Denizen, which viewed the development of prescriptive instructional guidance as a method for institutionalizing idealized teacher practices, was consistent with theories of the new professionalism (Giddens, 1991; Gray & Whitty, 2010).

The teacher as performer. This belief in the importance of content knowledge did not directly translate to understandings about what teachers need to know in order to teach well.

From the perspective of Denizen leadership, teachers needed some training in the “content they delivered,” but the development of pedagogical knowledge received priority. For example, one school leader thought highly-specified curricular resources were valuable because

104 Interestingly, unlike many of the others, this specialist was more concerned about content knowledge than pedagogical knowledge. The differing perspectives of the specialists corresponded to the grade band of students for whom they wrote instructional materials. The data suggested that classroom management was more of a challenge for teachers of older students.
they allowed teachers to focus more “on the execution of it” (i.e., their instructional delivery).

One curriculum specialist articulated the theory of action using a driving metaphor:

> When you're provided with curriculum, it gives you a greater lens so you're not as focused on the “Oh my gosh, I need to develop this lesson,” but it's more “How do I deliver this?” More focus on the execution, rather than trying to create something from scratch where I don't know where I'm going. It's like driving blind if you're not given enough information on what to do.

In this framing, the network’s instructional materials provided teachers with the information they needed so that they wouldn’t be “driving blind” in the classroom. This implied that the routinization of practice through the materials was a response to a perceived absence of expertise. The specialist also implied that by narrowing the scope of teachers’ work, the materials could reduce teacher stress (i.e., that “Oh my gosh” feeling).

Focusing on the “execution” included focusing on skills rooted in pedagogical knowledge such as executing particular pedagogical strategies (e.g., fish bowl or Socratic seminar) or teacher moves (e.g., using wait time, circulating the room, checking for understanding throughout lessons). As one network leader, this was a better use of a teacher’s time than “spending time looking at a standard and figuring out, ‘How am I gonna teach this standard?’” Notably, figuring out how to teach a standard is a skill rooted in pedagogical content knowledge.

This leader’s sensemaking reflected a dominant conception of teachers’ role at Denizen—teachers as performers who deliver content to students:

> I don’t care if you’re a great unit planner or not, and genuinely, I care more about your ability to execute. From where I sit, I would rather hire someone who’s really, really a great teacher—performer in front of kids, can really get results from kids and give them
the resources they need than have you spending your time on the weekends writing lesson plans.

The language of “executing content” or “executing a lesson plan” occurred many times in the data, across many informants, to the point where it seemed to have been absorbed as part of the organizational vernacular. This vision of a teacher as a performer emphasized the need for pedagogical knowledge above CK or PCK.

Although the performance metaphor was the dominant conception of teachers’ work, staff at Denizen stopped short of suggesting that a teacher could be excellent without understanding content. For example, one curriculum writer stressed that the highly-specified lead plans were not teacher-proof: “I don’t think that just anyone could pick it up and step into a classroom and just be a successful teacher.” The new leader of the instructional team at Denizen agreed, offering a critique of a peer charter network that had an even more prescriptive IGI than Denizen’s:

People feel like they're basically a cog or a robot where anyone can read word for word what it says, and that's a big problem. There's also the fact of if you as a teacher haven't really internalized this, then you aren't going to be able to serve your kids well.

It was unclear what this leader meant by “internalizing” a lesson plan, but it implied that some level of understanding (beyond pedagogical knowledge) was necessary in order to effectively execute the lead plans. Intellectual preparation was one potential strategy for building this level

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105 In academic literature, there is a “long tradition of comparing teaching to performance” in which teachers are actors on a stage delivering a script to their students (Sawyer, 2004, p. 12; e.g., Timpson & Tobin, 1982; Lessinger & Gillis, 1976).

106 A common critique of the performance model of teaching is that it suggests exactly this (Sawyer, 2004).
of understanding, but as data presented in earlier chapters showed, the process was not functioning as intended and (perceived) problems with teachers’ understanding persisted.

Nonetheless, pedagogical knowledge was the dominant concern. For example, when prompted to explain what was necessary for teachers to be effective the majority of curriculum writers focused on the performative aspects of instruction that constitute pedagogical knowledge. When asked how a prescriptive IGI might change the hiring process, for example, many members of the curriculum team emphasized relational skills and teacher moves from *Teach Like a Champion*. One person on the team who had previously been a school principal explained how the lead plans had influenced hiring:

Here's the lesson on figurative language, and we want to see you execute it. So, it's all about the execution of the lesson and the execution of the content of the lesson because it's almost like we're looking for teacher moves or, you know, we're looking at presence. And I think we looked for that before as well, but yeah definitely it's changed what we're looking for in applicants.

This description of hiring for “presence” by “looking for teacher moves” also reflects the performative model of pedagogic practice that was dominant across Denizen. Findings from Chapter Six about the high level of scrutiny and mandate (i.e., network power) applied in implementation of the IGI provided further evidence for the dominance of the performative paradigm.107

**Trouble Executing Content.** Even with highly-specified, sometimes explicitly scripted lessons, most teachers were still not “executing content” in the way the network envisioned. One

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107 Increased surveillance and evaluation are also fundamental characteristics of the performative model of pedagogic discourse (Barrett, 2009; Bernstein, 2000) and the new professionalism (Ball, 2003).
network leader explained it simply: “Certain teachers don't know how to use our curriculum essentially.” This reflected the perennial difficulty of changing practice. As a curriculum specialist explained, teachers were adhering to modes of instruction that were “more comfortable” like talking and delivering information because “it's just the way we've been doing things for so long, and changing that mindset is challenging.” The network was aiming for a ratio of teacher to student talk of no more than 30:70. Multiple informants had hoped that the more specified lessons they had been developing would help teachers attain this ratio, but in many cases, network staff were not seeing the desired results.

Many of the perceived problems with lesson execution seemed directly related to pedagogical content knowledge. For example, centering classroom activities around students and leading rich discussion (in order to achieve the 30:70 ratio) requires strong pedagogical skills, strong content knowledge, and deep understanding of how to mobilize pedagogy to cultivate conversation that would help students learn content (Myhill, Jones, & Wilson, 2016; Parker & Hess, 2001; Speer & Wagner, 2009). One curriculum specialist described how they had tried complementing the lead plans with professional learning that would help teachers execute the plans as intended:

There was like a fidelity to the broader idea… I would run a PD about promoting discussion. Then, the next chain of lessons was much more discussion heavy. And they would try to implement that but, now they're going back to the lessons that had existed before I got here.

Although this person did not directly discuss teacher knowledge, they described issues with implementation that were clearly related to teacher knowledge and related skills.

108 Notably, one of the four parts in Teach Like a Champion is dedicated to “ratio” (Lemov, 2015).
Other members of Denizen’s staff shared similar observations about teachers’ implementation of the highly-specified curricula. For example, the team described situations where teachers did not emphasize the most important part of a lesson because they did not understand the relative importance of different lesson components. Some staff members attributed this to a lack of intellectual preparation:

I think having something like, here it is, it's good, you can put it in front of kids as long as you have gone through it and digested some of it, then you're good to go. I think the double-edged sword of that is sometimes then teachers don't really know what to cut or what to prioritize because it is kind of just there and ready for them.

This person thought that having a ready-made curriculum had some benefits, but that some teachers were implementing the plans without digesting them first. Not knowing “what to cut or what to prioritize” are skills rooted in pedagogical content knowledge, but it seemed like the curriculum specialist thought teachers had the knowledge but were not using it.

Other curriculum specialists described similar problems with lesson execution that were related to pedagogical content knowledge. For example, another gave an example of teachers continuing to follow the lesson plan even when students’ responses indicated they were not ready to proceed to the next step:

I have teachers that don't give the kids enough time to actually write out their answers. And they throw a timer on the board because the page says, “We're going to focus 10 minutes on this page.” So, they give 10 minutes. And the kids will be thinking about the passage, and there's two minutes left. And the kids spend two minutes just thinking about the question, and nothing's written down. And then they think that it's just okay to move
on at that point. So, then they'll review with the class when more than half of the class hadn't written anything down yet.

Adjusting pacing mid-lesson to help students meet learning objectives is a skill rooted in generic pedagogical knowledge. For example, observing that students have not responded to a prompt and deciding to slow down does not require any particular content knowledge. In contrast, the observation that some teachers were unsure of how to react to student questions or misconceptions that were not predicted in lesson scripts reflected problems of practice related to pedagogical content knowledge. This is because questions and misconceptions about lesson material are content-specific.

There were a few alternative accounts showing other ways that network staff made sense of the observed difficulties with lesson execution in classrooms. The common theme across these accounts was willingness to learn. One curriculum specialist saw negative performance as the result of fundamental teacher characteristics unrelated to teachers’ level of knowledge or skills. In explaining why some teachers were “having trouble executing” the network lead plans, this person said: “My gut answer is that some people are just not effective people.” Some teachers, this person said, simply would not read and follow instructions, “check their email,” or “keep up with their homework.” For this informant, the easiest way to make sense of teachers not using the network’s lead plans as intended was to attribute incompetence to a lack of willingness to engage with sensegiving efforts (e.g., email, writing instructions) or engage in their own sensemaking (e.g., keeping up with assessing student homework in order to make sense of their progress and adapt lessons). This person’s assessment of teachers was an outlier in its tone, but other informants also explained implementation difficulties by highlighting the importance of willingness to learn. One explained:
Teachers that were more intellectually curious tended to do better with the new stuff. I think teachers that wanted to say they've mastered that thing they were doing in the classroom, and I think those teachers didn't like change, because then that meant they hadn't finished, feel successful with changes. And I think teachers that wanted, cared a lot more about what the kids were saying, were more curious about topics, or just were like, “I'm okay with being in year seven and I'm still growing.” Those people were like, “I may not agree with everything you do, but these are new ideas that I want to engage with.”

This specialist implied that there were two modal reactions to the lead plans. “Curious” teachers with a growth mindset would engage in learning to implement them. In contrast, teachers who “didn’t like change” were less willing to engage.

This illustrated that lack of knowledge and skills was not the only issue. Using an example related to content knowledge, a curriculum specialist in a different subject area also reflected on teachers’ willingness to learn and used a narrative that involved two distinct groups. These two groups of teachers responded differently to their lack of content knowledge. In this account, the first group would “go home every night, and they're watching Khan Academy, or they're actually completing all of the lessons way in advance so that they can learn the math content; they're also reaching out for support.” In contrast, the second group would “struggle with the content and just fake it 'til they make it.” In the mind of this staff member, faking it was associated with problematic instruction.

Although one school principal described hiring teachers based on perceived willingness to learn or coachability, it was unclear whether Denizen had a plan for addressing teachers who fell into this second category. At the organizational level, the network focused on developing a strategy to support teachers who were willing to learn but continued to struggle. Although a school leader expressed at a professional learning that they want their teachers to “become content experts” so they would be “better able to engage kids,” Denizen’s approach did not prioritize teachers’ content learning. In the words of one team member at the network office, the
plan was to “increase efforts to support implementation” of the lead plans through the content-neutral coaching. As they described it, increasing the already high level of teacher scrutiny was central to this strategy:

> It looks like lots of classroom observations, observations diagnosing the largest deficit that teachers have that are getting in the way of kids learning. Diagnosing the key levers for that and then figuring out and implementing a plan to alleviate it.

It was interesting that this staff member used the word “deficit,” as this term is unpopular among educators.

**Reducing Specificity and Increasing Coaching.** At the close of data collection, Denizen’s new model of teacher support was still developing. As one staff member shared, “[It] is still kind of inchoate, and we don't necessarily know what's going on yet.” There were two elements of the plan that were clear. First, as described in Chapter Six, in ongoing revisions of instructional materials at the middle and high school levels, curriculum specialists were dialing back the level of specificity in lesson plans. In particular, this involved restraint in the use of explicit scripting. Concerns about explicit scripting were connected to concerns about teachers’ content knowledge. The new leader of the instructional team articulated this connection:

> If you can't articulate why you're putting this in front of children that is a concern. Far too often, if people just give teachers a pre-scripted curriculum that will happen... having that strong explicit scripting prevents a teacher from growing enough in their own content knowledge and pedagogy. I think that a fully scripted curriculum is actually detrimental to kids.

This leader worried that providing teachers with explicit scripting would prevent them from learning and growing in their content and pedagogical knowledge, preventing them from being
able to articulate the importance of particular lessons. Understanding why a concept in a lesson is important requires knowing how the content relates to previous and subsequent lessons, i.e., familiarity with the landscape of facts and ideas in a domain, a key element of content knowledge. Another leader, whose position was higher in the organizational hierarchy, also expressed concern about the effect of explicit scripting on teachers’ content knowledge: “Teachers especially need to do more heavy lifting, the receive materials and believe the hard work has already been done.” This leader agreed that too much explicit script would prevent teachers from digging into lesson content and acquiring the content knowledge they needed.

This recognition of the importance of content knowledge seemed to be one motivating factor behind the second element of Denizen’s new teacher support strategy—more intensive coaching from the curriculum specialists.109 As the new team leader explained:

That's my very first basic non-negotiable. I tell them: “If you do not understand the point of a particular piece of your lesson, then you should not teach it. You should ask and get help from your school leader or from someone on our team, and we will help and sit with you.”

Having more contact with the curriculum specialists (through more frequent coaching) would give teachers more opportunities to ask questions about the content. The new leader was particularly interested in having the curriculum specialists start to do live coaching (in which teachers wear an earbud and hear real-time suggestions for improving their lesson delivery as they teach). They reiterated that the goal was to have teachers “really internalize” the point and flow of lessons in order to become able to “say this important, this is not.” As mentioned above,

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109 There were also financial concerns that may have played a role. In January and May 2019, there were layoffs at the network’s central office, and stories in the national print media reported financial problems at the network. However, no one would answer questions about the situation.
this skill of determining importance and prioritizing pieces of a lesson is rooted in pedagogical content knowledge, which is in turn rooted in CK and PK. While the team leader and others thought it was important for teachers to develop PCK, it was unclear how live coaching, in which coaches would course-correct using their own PCK, would help teachers develop PCK (through what seemed to be an assumption of osmosis).

**Doubts about the new strategy.** Teachers’ difficulty with implementation at Denizen (as reported by network staff) was not surprising. Often, new curricula do not gain traction because developers underestimate the amount of learning necessary for teachers to adopt them with fidelity (Ball & Cohen, 1996). A coaching model was a reasonable response to this conundrum. Instructional coaches can facilitate learning and help shift teacher practice (Sun, Wilhelm, Larson, & Frank, 2014). However, it was also unclear how the new coaching would accomplish its aims (as described by network leaders), given its content-agnostic model.

As described in earlier chapters, starting in Fall 2019, the network planned to move away from writing and revising curriculum. Instead, Denizen would assign each of its curriculum specialists, who were content area experts, to schools rather than subjects. As a result, curriculum specialists would be coaching all of the teachers in one school, meaning they would have to coach across all of the core content areas and provide PL to one school’s entire teaching staff on Fridays. A content-agnostic model would likely result in more emphasis on pedagogical learning (over CK and PCK) for every teacher in a particular school whose content area did not align with the newly assigned coach’s area of expertise. Some coaches worried that content-agnostic coaching would overlook the need to support teachers with content. Even though Denizen planned to provide the curriculum specialists-turned-coaches with content-related professional learning to help them coach across the curriculum, one worried it would not be sufficient:
Yeah, so we're supposed to be doing that, but that's also ... it's hard, because I've been studying math for my whole life. I went to college, and I have a pure math degree. I don't know if a PD is going to help me overnight become a historian, and understand the nuances between this war versus that war and how the wars are connected, as a general example. So, I do think that professional development will help; I just ... it's almost like me taking a math teacher and throwing them into a history class. Like I think they'll survive, but how well?

This specialist thought that supporting teachers with content-specific pedagogy (i.e., PCK) required relevant content knowledge, and they believed that acquiring the necessary knowledge required more than a few professional learning workshops. They related their background in mathematics with apparent pride, which strengthened my impression of their belief in the importance of deep content knowledge. Another specialist also emphasized their content area training (e.g., “I went to college, and I specialized in [the subject]”) and how they used that knowledge in their work (e.g., “It requires hours and hours of research on my end to even approach a 40-minute lesson”).

Several members of the team echoed concerns about coaching teachers in different content areas. After all, many had cited a lack of teacher content knowledge (and PCK) as the driver of observed difficulties with lesson execution. It was not surprising that some worried that the network’s plans would not address what they saw as the fundamental problem. One specialist lamented what they saw as a consistent emphasis over time on pedagogical knowledge at the expense of content:

I feel like our coaches are great, our principals are amazing, but everybody focuses so much on the pedagogy of teaching… and the management of teaching, that’s where
science and social studies have really been undervalued in terms of... building teachers
content knowledge for success in those areas.

The shift to coaching across content areas only exacerbate this perceived “undervaluing.”

That was not the only interview in which informants pointed out discontinuity between
their beliefs about what teachers needed for success and the network’s new plans for
instructional support. Another person explicitly described feeling like the network’s leadership
had not considered their input in designing the new support strategy:

I just think there's not a lot of voice for the content experts [in the network]… A lot of
content experts aren't really being listened to at the top… there's a move to de-expertize
[sic] the content and find ways to support teachers at schools much more holistically. I
had a conversation with a teacher who said, ‘I feel like I'm a really good teacher but I
want to become a really good history teacher.’ I don't think we're providing that support
now.

As this specialist communicated a belief in distinct content-area expertise (reflective of PCK),
their invented term “de-expertize” evoked critiques of genericism in the new professionalism
(Beck, 2009; Gray & Whitty, 2010; L. Jones & Moore, 1993) and the exteriorization of
knowledge from experts in postmodernity (Lyotard, 1984).

This informant went on to describe how a coach who did not know the content behind a
lesson could walk into a Socratic seminar in a network classroom and see a “very serious, very
in-depth conversation that was really going and pushing boundaries” even if from a content
perspective, students “actually were engaging in pretty shallow thinking.” They expected that
when the network shifted to the new coaching model, there would more examples of teachers
doing “all of the structural right moves of what good teaching looks like, but the content of what
was coming out of students wasn't at the level it could have been.” This person described how a coach with expertise in the content could use support classroom teachers with learning how to “layer” content throughout the lesson and deepen discussion. In this person’s sensemaking, this type of support, which involves helping teachers develop PCK, requires a coach with PCK in the same content area.

There were related concerns about professional learning at the network. Theoretically, a significant quantity of PL in content (CK) and content-specific pedagogy (PCK) could balance a focus on generic pedagogical skills in coaching. However, it was not clear that Denizen was planning such a balance. Early in data collection, a leader described Denizen’s agenda for professional learning as not only digging “into abstract teaching practice or whatever” (i.e., teaching PK) but also “doing things that are useful to you as a teacher of science, or you as a teacher of history” (i.e., teaching CK and PCK), but multiple sources of evidence suggested that the balance of professional learning at the network tipped toward general pedagogical knowledge. These sources included direct observations of professional learning events over six days, examination of PL calendars, staff descriptions of PL, and staff sensemaking about PL.

Some sessions focused on content or content-specific pedagogy. For example, three network-wide PL sessions for teachers observed by the research team involved analysis of interim assessment data, planning instruction to remediate areas where students struggled, and discussion of intellectual preparation contextualized in the curricula. Also, a curriculum specialist described leading a session in which teachers applied a Lemov instructional move (called Stretch It) within the context of a particular lesson, “scripting” questions into their lesson plans that encouraged students to think more deeply about content. Also, across the network,
school leaders dedicated the second week (of four) of summer professional learning for teachers to “setting a strong academic floor.”

Despite these events, it still appeared that the preponderance of professional learning rested with pedagogical knowledge or administrative matters. Four days of professional learning for school leaders covered topics ranging from reporting personnel issues to HR, evaluating and coaching teachers, using social media, budgeting, goal setting, planning field trips and service learning, and planning for teacher professional learning. In the latter session, which was four hours long, network leaders emphasized that principals should use summer professional learning for cultivating a data-driven culture and team building at the school level. A high-level leader warned that “culture eats strategy,” meaning that leaders could not accomplish their school-level goals without a staff culture conducive to performance improvement. This implied a hierarchy of needs reminiscent of the way that network staff discussed classroom management. Just as a well-managed classroom was a prerequisite for focusing on content, a well-managed school staff was prerequisite for focusing on content area pedagogy. Schools’ scopes and sequences for weekly teacher professional learning reflected this as well—almost every session was administrative, related to relationship building among staff or with parents, or connected to Denizen’s “taxonomy” of generic pedagogical moves derived from Lemov. Finally, the network’s “Tree of Teacher Development,” a document given to school leaders as a coaching resource, displayed a similar hierarchy of skills. Interestingly, even many of the highest-level skills were content neutral (e.g., “Make clear your motivation for decisions to scholars,” “Working hard when the work is hard,” and “Using independent practice and work time to provide individualized feedback to scholars”). A few, including Stretch It and Differentiation implied a need for PCK.
Some people at Denizen, those who expressed concern about the new coaching model, also worried that there was not enough content area training in professional learning. As one explained:

We have a really strong team of people who develop and deliver really solid, academic PD for our teachers. And I think there’s this frustration, especially when you’re a subject area teacher, which is like there is certain PD that I get at my school. A lot of that is like Doug Lemov, taxonomy PD, which is great. But at a certain point, especially if I’m a really strong teacher, okay, I know how to get 100% of kids to do what I need them to do, and I know how to use wait time effectively in my classroom. What about, where do I get to learn about the content? Where do I get to sit down with other teachers who also teach that same content area and just talk about history? Talk about math?

It was notable that even when expressing a need for content area PL, this specialist also implied that the development of PCK-related skills was secondary to classroom management.

The limits of scripting. Related to concerns about the need for teachers to develop more content knowledge and PCK, many stakeholders at Denizen told stories that indicated they were encountering the limits of specificity. Despite their efforts to reduce opportunities for teacher discretion in lesson planning and execution, it was not possible to include scripts for all the contingencies in a lesson that would require the discretionary application of PCK. As one curriculum specialist explained: “Kids ask questions, kids get stuck, I could write a 20-page script of ‘If a child asks this question, how do you respond? If a child asks that?’” However, they did not have time to do that. Also, when it had been tried in some of Denizen’s courses, there had been diminishing returns to the efforts. The leader of the instructional team said they had found that “when there [was] too much extra scripting” teachers would not actually read all of it. Another curriculum specialist described a very similar revelation: “And then even after you plan it all out,” something happens and “then it kind of throws all of your scripting out, and then you have to in the moment, make a decision or make a change.” It was not possible to “always predict” what would happen and script for it. This person continued: “I realized that kids are
going to say the darnedest things, and you have to be able to roll with those punches.” As a third curriculum specialist said, “Teachers need to know, ‘Okay, this is the moment that I need to ask a question,’ or ‘This is the moment I need to just sit still and give them some thinking time.’”

This kind of momentary discretionary decision-making about how to connect kids to content effectively relied on teachers’ PCK. Thus, the plans for content-neutral coaching combined with a professional learning agenda that still heavily focused on pedagogical knowledge was even more of a concern.

**Summary.** At Denizen, the majority of network staff viewed its highly-specified IGI as a tool for quality control and as a way to lift the burden of instructional planning from teachers, especially those with limited experience. Sensemaking about the network-developed lead plans emphasized teachers’ pedagogical knowledge more than CK or PCK, but the majority of staff attributed widespread dissatisfaction with the way teachers were “executing” the plans to a lack of content knowledge and described problems that appeared to stem from a lack of PCK. In order to improve the implementation of plans, the network was moving to more intensive teacher coaching, but curriculum specialists would be required to coach outside their areas of content expertise. Several expressed concerns about how this plan would address the problem of teacher content knowledge, especially given the emphasis on pedagogical knowledge, school culture, and administrative tasks in professional learning.

Overall, analysis of sensemaking at Denizen revealed that the development of the highly-specified lead plans was a response to perceived gaps in teachers’ knowledge and expertise. As shown in the analysis of the IGI in Chapter Six, Denizen had worked to encode the knowledge base for teaching in instructional materials and routinize instruction through emphasizing generic, performative pedagogical skills. However, sensemaking revealed that the teachers’
“execution” of the course content in the lead plans continued to fall short of Denizen’s instructional vision. Although the sensemaking of some stakeholders revealed that they recognized a need for support teachers’ development of content knowledge and PCK, the network continued to emphasize training in content-neutral instructional moves in professional learning and in its new coaching strategy.

Making Sense of Teacher Knowledge at Metro

In the following sections, I examine stakeholder sensemaking at Metro (and Novel) related to the perception of teachers’ level of knowledge and skills, beliefs about the types of knowledge teachers needed, and understandings of teacher learning. The analysis reveals some commonalities with Denizen but also significant differences in the dominant conceptions of teacher knowledge. Staff at both networks seemed to view teaching as highly complex work. In addition, staff at both networks had concerns about teacher expertise and saw instructional materials as a way to support new teachers. However, after years of providing what staff called “content-agnostic” and “curriculum-agnostic” support, Metro’s recent approach to curriculum and professional learning has emphasized teachers’ learning of content and PCK more than earlier iterations of its IGI and more than Denizen’s IGI.

The Challenge of Ambitious Instruction. Stakeholders in Metro’s IGI repeatedly spoke about how the Common Core had made the work of teaching deeper and more difficult for teachers. For example, a coach from the Affinity Field Support Center who co-facilitated Metro’s teacher leader PLC explained the challenge teachers faced:

A lot of those teachers went into the job because they liked finding the right answer. All of a sudden someone pulled the carpet out from under them and said, “And now you’re
gonna teach this way!” When I look at that I think, “Oh wow, they’ve really had a change to go through.”

This facilitator recognized that transitioning to the Common Core required teachers to make a significant mindset shift and that such a shift was not easy to make. Another stakeholder, an assessment specialist at Novel, had a similar reflection about the increased complexity of the tasks on the state assessments, which had been revised to align with the CCLS. This person explained how these changes made teachers’ jobs more complex: “It used to be, like with the old standards, you could literally teach the kids to solve three different kinds of problems really well, and they would be successful on that. That is no longer true.” Thus, teachers who began their careers after the introduction of the CCLS also faced a significant challenge.

Stakeholders often recognized this challenge as they related their perceptions of teachers’ level of knowledge and expertise. Informants consistently expressed concerns about the strength of instructional practice across schools. Unlike Denizen, there were fewer comments about instructional delivery and classroom management. Like Denizen, there were mentions of content knowledge gaps. For example, a leader of social studies professional learning at Novel said, “In most programs, student-teachers are not taught Global History content. So, you may have teachers who are still struggling to make sense of how everything connects.” Similarly, an assessment specialist expressed concern that teachers were teaching a rudimentary, procedural version of a discipline because they lacked deep disciplinary knowledge. In addition, many concerns about teacher competence related to skills rooted in pedagogical content knowledge such as assessment, giving feedback, and instructional planning. For example, a Metro principal said, “Teachers aren’t necessarily trained to develop these inquiry-based collaborative tasks…
They are stuck.” Developing inquiry-based curriculum that matches content to instructional strategies and student characteristics requires significant PCK.

The Value of Shared Instructional Materials. The challenges of the CCLS and the relative scarcity of PCK were two factors that contributed to Metro’s decisions to direct their teachers toward Novel’s curricula, to pilot Jump Math, and to develop Metro Algebra. Also, in the absence of codified instructional materials, teachers were turning to resources that Metro’s staff considered inadequate. As the leader of Metro’s instructional team shared:

There’s a RAND study about teacher adoption of Common Core Standards and the materials that they use. And the number one resource that secondary teachers use is Google, and the number two is Pinterest. And it is just like being stabbed, right?

Previously, Metro had encouraged teachers to share lessons across schools using their online platform but found that “lower quality lessons were spreading.” This led them to take a more active role in first vetting and ultimately creating lesson materials, seeing them as a lever for spreading and institutionalizing high-quality Algebra practice.

During their interview, the leader of Novel’s instructional team, who worked closely with this person, cited the same RAND study (Opfer, Kaufman, & Thompson, 2016). Novel’s leader then reiterated the study’s finding that one of the three things that teachers need to shift their practice is “a coherent curriculum that is tied to standards.” Metro and Novel’s leaders expressed hope that grounding more of their professional learning in a shared curriculum would help shift teacher practice more than its earlier forays into content-agnostic professional learning focused on pedagogical moves.

Metro’s leaders articulated clearly that the organization’s theory of action centered around building capacity. Toward this end, Metro aimed to create professional learning
experiences that were reflective, complex, and sustained over time, reporting that teachers had
told them: “It’s not that we don’t know how to do it. We don’t have the time and space.”
However, Metro staff had found that even when teachers would leave their PL events highly
motivated to apply new knowledge and skills in their classrooms (according to internal exit
surveys), changes in practice would fail to materialize. Speaking from the hypothetical
perspective of a teacher, one of Metro’s leaders of professional learning imagined what
explained this pattern:

I'm all excited. I'm going back to my school, but then after two days, I'm falling back in
my old routines and habits because I can't change overnight. Humanly, it's not possible. I
need a coach, or I need somebody to be part of that, giving me feedback around those
things, pushing me to do something, reminding me.

Without additional support, Metro staff reported that teachers fell back into instructional
methods that felt comfortable for them.

Metro’s leaders thought that grounding the PL in instructional materials might help new
habits stick. Novel also came to this realization (though perhaps a few years sooner than Metro).
The leader of Novel’s instructional team described how even in the same general content area,
teachers of different courses (e.g., biology versus chemistry) had different planning struggles.
When teachers at the same PL session did not “have a common curriculum,” then “a lot of the
school work [was] hard to do.” Some teachers would say, “This doesn’t really apply.” This
leader regretted that they would “wind up having these very abstract or generic conversations.”
The network leaders hoped that curriculum-centered PL would make conversations more
concrete and thus more likely to shift practice. This reflected an understanding that increases in
both content and pedagogical knowledge were necessary for improving teacher performance.
Metro teacher leaders echoed this belief in a conversation at a monthly meeting of their PLC. One described feeling caught in a “constant push and pull around content versus structure.” Another discussed how a lot of the teachers at their school have “learned names for pedagogical strategies, but the content isn’t there.” A third lamented the lack of professional learning opportunities related to content: “As an English teacher, I have done five in 16 years… [PL facilitators] assume you know how to read and write so they don’t need to teach you anything else.” In contrast, another described focusing on content for most of their career only to find they didn’t have the pedagogical skills they needed to be successful in a new school. The leader of Metro’s instructional team responded to all of this by saying, “It is the ‘both/and’ instead of the ‘either.’” Namely, content knowledge and pedagogical skills are both important. Stakeholder sensemaking at Denizen reflected this belief as well, but with a heavier emphasis on pedagogy. Additionally, documentary and descriptive evidence at Denizen suggested that professional learning emphasized pedagogy as well. As I describe below, PL at Metro and Novel was more content-oriented.

Curricula as a Developmental Scaffold. Staff at Metro and Denizen were intentionally working to understand common developmental trajectories among their new and less experienced teachers and design scaffolded resources for supporting and accelerating that development. One leader at Novel articulated this goal:

I am really curious about what type of curricular resources work for what type of teachers so we can also get a much better understanding of, and not that every first-year teacher is the same, but generally speaking, what do first year teachers need?
In part, this interest was driven by inquiries from school principals and teacher leaders. A PLC facilitator at Metro reported that “developmental supports for new teachers” was a topic that continuously arose at meetings of their principal and leader professional learning communities.

In response to this interest, Metro built out its supports with new teachers in mind: “We err on the side of more supports. So, if a brand-new teacher needs it, we are probably going to put it in the curriculum.” A belief that curriculum could support new teachers was shared at Novel. A high-level leader at Novel (who was a former employee of Metro) articulated this understanding, framing instructional materials as a mechanism that could compensate for a lack of expertise:

If you are a new teacher, you don't know how to write your own curriculum. Why wouldn't you be using something that has already been developed, tried out in classrooms, refined over time, and you have this professional network of folks that you can be constantly talking to about how things are going in your class?

This framing echoed a similar perception of new teachers at Denizen. This leader implied that new teachers need to focus on “how things are going” in their class, rather than engage in instructional planning. This shared perception (at all three networks) that the complex work of teaching is too broad for a novice to master all at once is supported by empirical research on the developmental trajectories of new teachers (Ingersoll & Strong, 2011; Kapadia, Coca, & Easton, 2007), as is the understanding that curriculum can be a source of support for the development of new teachers (D. L. Ball & Feiman-Nemser, 1988; Grossman & Thompson, 2008; Larrain et al., 2017). However, despite these similar opinions, there was less emphasis on curriculum as a tool for quality control at Metro, and more emphasis on it as a tool for teacher professional learning.
**Teachers as Experts.** Notably, in sharing their perception of teacher competence, a high-level network official at Novel defined a masterful teacher as someone “who has both a deep sense of content” and “has a deep understanding of the students in front of her.” This understanding of teacher expertise included the more abstract concepts of content knowledge and PCK, making it more consistent with the classic professionalism than Denizen’s conception of teacher practice as largely performative. This leader continued, however, to explain that very few teachers had “that mastery.” In this leader’s estimation, Novel’s professional learning around its instructional materials aimed to address this gap but was still falling short:

We ask them to do things like surface students' understanding and misunderstandings, have students talk about different strategies, use rich tasks that allow students multiple entry points. But we don't necessarily help them to figure out, ok so my kids are showing this, how do I get them from here to here.

The skill of observing students and “figuring out,” in the instructional moment, how to help them meet learning objectives, is more accurately a constellation of teaching practices exercised with discretion. These practices represent a situated expertise that it is fundamentally rooted in pedagogical content knowledge, a key component of the classic professionalist conception of the knowledge base for teaching.

At the close of data collection, Metro and Novel were both employing strategies in professional learning to cultivate teacher content knowledge and PCK. For example, in social studies, Novel’s facilitators were focusing on “providing an opportunity for teachers to engage as adult learners, to understand the historical topic” in their “curriculum-based professional learning.” Interestingly, PL facilitators at Novel also intentionally exposed teachers to academic research about teaching and learning, incorporating structured collaborative sensemaking.
opportunities into sessions. For example, at a PL session for users of the Novel Global History curriculum, facilitators asked social studies teachers to rank test-prep strategies in terms of their usefulness for student information retention. Then, they invited teachers to explore research on information retention and participated in a small group discussion around pre-prepared questions (e.g., “What surprised you?” “What will the implications of this research on your practice be?”). This exposure to the content of academic research (in addition to content for student learning) illustrates a sense that abstract research knowledge in education can also be actionable teacher knowledge. Belief in the necessity of connection between knowledge produced in university settings and the knowledge of practice is a core feature of classic professionalism. Further, this exploration of pedagogical strategies that served the goal of content learning (i.e., “information retention”) was an instance of an opportunity for developing PCK, again providing evidence that the dominant logic of professionalism in Metro’s IGI was more aligned with classic than with new professionalism.

Professional learning sessions also targeted the development of pedagogical content knowledge. As described in Chapter Six, members of Novel’s instructional team had developed its guide to content-area instructional routines in science and social studies that mirrored the disciplinary practices used by scholars in these fields. These were designed to be educative for teachers using the instructional materials, but the routines also provided opportunities for structured, share practice. As one facilitator explained:

[The team] wanted to give teachers that opportunity to rehearse in a safe space. We also frame the rehearsals as it's less about helping [TEACHER] improve his teaching, and it's more about us collectively being able to have a conversation about teacher moves.
Interestingly, the concept of “rehearsal” appears to align with the performative model of teaching described earlier, but because the routines involved disciplinary thinking skills, the “conversation[s] about teacher moves” were grounded in the content of particular lessons. This made the task more abstract and less routine relative to rehearsal of content-neutral pedagogical moves (e.g., asking students to track the speaker visually or teaching students to turn and talk). Notably, this finding aligns with the findings of Lampert and colleagues (2013) who found that rehearsals could support the development of teachers’ skills in improvising response to students (i.e., their PCK). Similarly, in its nascent Algebra program, Metro sought to teach practitioners content area pedagogical techniques (i.e., mathematical discourse strategies) that would support deep engagement with mathematical concepts. Practicing this type of discourse necessarily required knowledge of the underlying content.

This emphasis on content-specific pedagogy in the professional learning at Metro (and Novel) reflected a conception of teacher knowledge that was consistent with classic professional understandings of teacher expertise. There was an assumption that teacher understanding, in addition to lesson execution or delivery, was essential:

If we bring teachers together as professional learning communities to unpack student work, unpack the big ideas, experience things as learners and then plan lessons together… if we support teachers in understanding, then teacher practice will shift and student outcomes will improve.

No one at Metro or Novel implied that a teacher could deliver a high-quality lesson as designed without understanding of the underlying standards and content. In contrast, Denizen’s sensemaking around the development of their routinized instructional materials and its pedagogy-heavy agenda for professional learning suggested that its leaders had hoped this was
possible. However, at the close of data collection, it seemed Denizen was discovering that it was not.

**Comparison of Conceptions of Teacher Knowledge at Denizen and Metro**

In summary, perceptions of teacher competence drove IGI development at both networks. Informants from both networks shared concerns about teachers’ capacity to successfully plan and execute high-quality, standards-driven instruction. Content knowledge was a challenge for teachers at both networks, as was pedagogical content knowledge. However, network leaders saw the development of pedagogical skills for managing classrooms as prerequisite to the development of competencies related to CK and PCK. There was also a common perception that mastering skills related to all three domains of teacher knowledge at once as a novice teacher was not feasible. Curriculum developers at both networks saw robust instructional guidance as a way to support struggling early career teachers. At Metro, shared curricula and aligned professional development were tools for teacher learning. At Denizen, they were also tools for quality control.

Overall, much of the sensemaking about the highly-specified instructional materials at Denizen focused on pedagogical moves more than other types of teacher competencies, consistent with the new professionalism. The dominant paradigm of teaching was a performance model. However, many staff members attributed teachers’ difficulty with implementing the lead plans to their lack of content knowledge and PCK. This reflected a broader, more classically professional understanding of the knowledge base for teaching—one that combined pedagogical knowledge, content knowledge, and PCK. Denizen’s network-level strategic decisions, however, did not align with this. The network’s new model of teacher support involved more intensive coaching, but curriculum specialists would be coaching outside of their area of content expertise.
Network leaders hoped that this new model would improve teachers’ implementation of the curriculum, but several members of the instructional team expressed doubts about their ability to support teachers’ development of CK and PCK in content areas outside of their expertise.

At Metro (and Novel), stakeholder sensemaking focused more on content knowledge and PCK than at Denizen. Many stakeholders shared this conception of teachers as experts needing a deep knowledge base. While Metro stakeholders saw pedagogical knowledge as prerequisite before teachers could develop in other areas (like at Denizen), there was a renewed commitment to professional learning grounded in the shared instructional materials targeting the development of PCK. Staff at Metro (and Novel) thought this approach would improve knowledge transfer from professional learning (i.e., teachers applying their learning at off-site PL in their own classrooms), which had been particularly thorny. Both networks’ theories of action envisioned PL as a key lever for effecting classroom level change.

Notably, both Metro and Denizen had identified problems with teacher PCK. Denizen responded by encoding PCK in its highly-specified lesson plans. When teachers continued to struggle with PCK (indicating they had not acquired PCK from following the network’s lesson plans), Denizen planned coaching that would focus on generic instructional moves. Metro and Novel responded to similar problems with instruction by encoding PCK in instructional materials (to a lesser extent than Denizen) and increasing the emphasis on PCK in professional learning by using the shared curricular materials and codified content-area instructional routines to give teachers opportunities to practice skills emerging from PCK.

**Conceptions of Authority over Practice**

Stakeholders’ understandings of the knowledge base for effective classroom teaching (i.e., what it included, how it was acquired, how it was distributed, and whether and where it
should be encoded and embedded in instructional materials and organizational routines) had implications for the framing of teacher practice, especially with respect to the locus of authority over practice (i.e., determining what should be taught, how to teach it, and what counts as teaching it well) and the resulting level of teacher autonomy. In this section, I explore stakeholder sensemaking related to network IGIs and authority over practice in order to identify the dominant conception of teacher authority operating at each. My analysis of the evidence also illustrates how conceptions of teacher knowledge informed how networks understood authority over practice.

**Making Sense of Authority over Practice at Denizen**

As shown in Chapter Six, Denizen’s high levels of IGI alignment, focused around state learning standards and state learning standards, emphasized the authority of the state to determine what students need to know and be able to do. Denizen’s highly-specified instructional materials and relatively strong degree of network power in implementation combined to make its IGI more prescriptive than Metro’s. This prescriptiveness suggested that the network located authority over teacher practice among Denizen’s managerial staff. These findings aligned with documented conceptions of authority in the new professionalism.

In this section, I seek additional evidence that supports or disconfirms findings from the four-dimensional analysis by examining sensemaking about authority over teacher practice among stakeholders at Denizen. Overall, the analysis reveals that while there were varied understandings of where authority over practice should be located, statements about giving authority to teachers (and related organizational activities) were largely symbolic. Overall, network leaders located significant authority with school leaders, but Denizen claimed ultimate jurisdiction over the delivery of instruction (with its instructional materials) and jurisdiction over
what counted as proficient instructional practice (with its high-stakes accountability systems). School leaders’ authority mainly involved implementing teacher accountability systems and managing their schools’ staff of teachers. Network leaders engaged in significant sensegiving efforts aimed at influencing the exercise of that authority.

The sensemaking analysis revealed further evidence that Denizen ceded authority over the content of instruction (i.e., what to teach) to the state. Several curriculum developers at Denizen said they told teachers that covering particular topics or skills was non-negotiable. For example, one said, “You do have to make sure to compare those two empires because the state test is going to make you compare those two empires. The state wants us to do it this way, so please do it this way.” The topics tested by the midterm and interim assessments written by Denizen’s instructional team reflected the state regulatory structure and held teachers accountable for covering topics that would be on the state test. This accountability was two-fold: teachers’ performance evaluations and student performance. As one teacher at a math professional development session described, students suffered if teachers did not follow the scope and sequence aligned to the network’s assessments: “It wasn't a popular method, but it was tested on the exam. So, if someone didn’t use it, the kids didn’t learn it, so it wasn’t fair that they were tested on it.” The risk that students would perform poorly if they did not follow the highly-specified curriculum likely increased teacher compliance with the IGI. In translating the definition of school knowledge given by the state into its IGI, the network acted as an intermediary linking the exostructure of the state to the endostructure of classrooms, consistent with findings in other studies of IGIs (Mehta & Fine, 2015). Using its managerial authority to enforce coverage of state standards, Denizen reified state authority over teacher practice. This
illustrated how state claims to authority over knowledge\textsuperscript{110} directly informed managerial claims to authority over practice.

Additional evidence showed a connection between conceptions of the knowledge base for teaching and claims to authority over instruction. As shown in the previous section, perceptions of teachers’ knowledge and skills drove Denizen’s efforts to develop lead plans across most subject areas and grade levels. A school principal echoed the curriculum specialists in questioning the ability of new teachers to write lesson plans: “What [new teachers] create will be worse. If they think they can do better, they can try, and they won't be as good. Not because they are bad people or won't be great. They just have no idea.” Staff at Denizen expected new teachers to use the plans because of a perceived lack of competence. In writing the instructional plans and applying a mandate to their implementation, Denizen claimed authority over classroom practice.

**Inclusion of Teacher Voices.** Despite this strong mandate and claim to authority, there was some evidence of efforts to include teachers’ voices in infrastructure design. As shown earlier, there was concern among network staff that perhaps the pendulum had swung too far and instruction was becoming too routinized in grade levels and subject areas where resources were highly codified. As a result, revisions of the lead plans involved restrained use of explicit scripting. In some subjects, curriculum writers also changed the structure of their plans to require teachers to choose exercises or texts to plug into lessons. Also, staff at Denizen used professional learning time to try to empower teachers to engage in deeper intellectual preparation and modify lessons more. One staff member reflected that "it was great" when teachers felt empowered to

\textsuperscript{110} A claim to authority over school knowledge is necessarily a claim to authority over the knowledge base for teaching.
adjust: "That’s when they take ownership of the lessons.” If teachers do not feel empowered, their “heart and soul won’t be in it quite as much,” and they would be “less connected to the material that they’re putting in front of kids.” There was a concern that this could hurt student engagement and achievement. Another curriculum specialist, one who used explicit scripting extensively, expressed a similar sentiment. This person described how they framed the scripts for teachers:

What I really try to do is teach teachers that these lessons are the floor. I’m trying to give you everything I can to make you successful, but you are going to hear my voice, and if this is not your voice, then let’s change [the lead plans]. Let’s talk about them.

This stance stemmed from this specialist’s personal experience implementing a heavily-scripted curriculum when they were a classroom teacher, which they said “felt robotic and not personal.” The specialist wanted teachers to feel comfortable rephrasing scripts, using them as exemplars, rather than verbatim requirements. However, they implied that teachers needed to clear changes with them in advance, which vested the ultimate authority with them, rather than with teachers.

Although there were no reported plans to change the level of network power (i.e., relax mandates, decrease monitoring, change incentives and sanctions) behind the IGI implementation at Denizen, the network did use a few additional strategies for including the voices of teachers in IGI design and implementation. These were aimed at cultivating teacher buy-in, especially at the high school level. These strategies included formal structures for getting teachers’ feedback on new curricular resources, such as administering short, frequent teacher surveys and hiring teachers as curriculum advisors (a role with a small stipend). As the leader of the instructional team explained early in the data collection period: “I don’t want us to ever be in a place where we don’t have teacher input on this stuff, or we don’t have someone who’s on the ground using it
giving us immediate feedback on how it’s going.” This comment suggested tacit, partial recognition that perhaps “guiding people’s behaviors and practices with norms is far more efficient and effective than imposing costly and annoying oversight” (Johnson et al., 2015, p. 119). In previous research, teachers who experienced restructuring efforts driven by top-down decision making tended to resist change (Smith et al., 1997).

In theory, these network activities could reflect movement toward what Hopkins and Woulfin (2015) called a “participatory design approach” to infrastructure development, in which all stakeholders contribute and share authority. Participatory design is a promising strategy. Other studies have shown that teacher participation in the design of school improvement strategies can lead to a higher level reform buy-in than would otherwise be expected (e.g., Fullan, 2007; Printy, 2010). For example, Redding and Viano (2018) found that teacher involvement in the development of improvement initiatives led teachers to find the programs less challenging to their autonomy than externally developed initiatives.

However, the data suggested that statements relating to including teachers in infrastructure design were largely symbolic. For example, the research team observed a mathematics professional learning session in which math curriculum specialists asked middle school math teachers to help them revise course scope and sequences. However, meeting facilitators dominated the talk in that session and effectively ignored several teacher suggestions. Further, some curriculum specialists reported that they did not actually have curriculum advisors for their content area. For example, only two of seven available curriculum advisor positions in

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111 It was unclear whether resistance was a pervasive issue. Although the research team did observe several teachers raising frustrations with the lead plans (specifically, pacing difficulties) at a PL session, the preponderance of staff at the network hub reported that teachers were pleased to have more specified instructional guidance. Further research on teachers’ experience of prescriptive guidance is of great interest to me.
math were filled at start of data collection. This was partially due to budget constraints, but also reflected a shared perception that skilled teachers were scarce. One math specialist explained: “That's been hit or miss as well, in terms of where we could find teachers who were willing to do the role that we felt were qualified that weren’t also a grade level leader or doing six other things.” By the end of data collection, there were none. The other math specialist echoed this: The teachers that have applied for that role have not, in my opinion, had the best academic content knowledge; I didn't feel like their content knowledge was strong enough. Or I guess they were not strong enough in the classroom where we felt like they would be able to balance the workload of teaching as well as helping with the curriculum. That said, there were some cases where the curriculum advisors\textsuperscript{112} were actively involved in infrastructure design. In high school math, for example, the math team leader shared, “My two high school curriculum advisors are intimately involved in the curriculum creation, and we work really closely together on that, and they’re just really awesome.” Another curriculum specialist who worked with elementary school offered similar praise of their two curriculum advisors, “[They are] not only phenomenal teachers but they’re able to give me the perspective of someone on the ground, what's working and what's not working and then modify that accordingly.” Thus, reports of the use of this role were mixed. It was clear that participation in the role, which granted teachers some authority over the instructional infrastructure, was contingent upon perceptions of expertise.\textsuperscript{113} This was another example of how perceptions of knowledge structured patterns of authority.

\textsuperscript{112} Curriculum advisors also served as school-based teacher mentors who could assist their colleagues with lesson plan implementation.

\textsuperscript{113} It was also contingent on budget. At the end of data collection, members of the instructional team at Denizen were uncertain whether the role would continue.
**School Leader Authority.** Despite the network hub’s claim to jurisdiction over instructional practice across Denizen, curriculum specialists had limited authority to sanction teachers who did not comply. As one explained, “If you don’t [teach a particular topic], that’s on you. I can’t make you do anything.” When curriculum specialists felt that teachers were not making appropriate instructional choices, they would sometimes inform school leaders. School leaders had authority to enforce curriculum implementation as they were responsible for teacher evaluations, hiring, and firing.

All of the school leaders were former teachers, rather than members of a managerial class trained for bureaucratic administration (e.g., a hospital administrator with a degree in public administration who manages doctors). In this respect, some scholars could allege that Denizen’s authority structure aligned less closely with the new professionalism and more with semi-professionalism. As in almost all school systems, principals and system-level employees (who scrutinized and evaluated teachers’ work) were former practitioners. According to Lortie (1969), a hierarchical structure in which former practitioners manage current practitioners is a fundamental feature of semi-professionalism. In semi-professional organizations, these administrators exert bureaucratic control and “do not recognize in their subordinates the kind of knowledge that would exempt them from such control” (Goode, 1969, p. 198). The evidence about perceptions of teacher competence presented earlier suggests that Denizen reflected semi-professionalism to some extent. However, Etzioni and his colleagues were writing before postmodernity and before the rise of new professionalism. As shown in Chapter Two, former practitioners can adopt and apply the technologies and strategies of the New Managerialism. Network leaders at Denizen developed the high-stakes accountability system at Denizen, implemented it with a strong mandate, and required that school leaders conduct the extensive
scrutiny involved. Under the new professionalism, “competencies become primarily related to, defined, and assessed by, the work organization” (Evetts, 2009, p. 252). Therefore, I believe it is also reasonable to characterize the authority over teachers at Denizen as managerial and reasonable to claim it was consistent with new professionalism. The simultaneous presence of characteristics of semi- and new professionalism in conceptions of authority at Denizen illustrate that such logics can co-exist and intermingle within a single organization. To the best of my knowledge, such co-existence has not been well-documented in the literature. It is possible that the co-existence reflects the broader context of the shifting landscape of professionalism, the limitations of using typologies as conceptual tools, or something else, but more research in this area is necessary to understand: 1) whether such co-existence of logics of professionalism is prevalent in other organizations, 2) why it occurs, and 3) how it matters for the working lives of individuals.

Although they lacked some formal authority over IGI compliance, network leaders used professional learning to engage in sensegiving in order to influence how school principals exercised their authority. This guidance was not only around how to implement the high-stakes accountability system but also about how to talk to teachers about their performance. For example, the network’s leaders coached school leaders to do less asking and more telling in conversations with teachers. For example, at a summer professional learning session, one high-level official told school leaders:

For newer teachers, just tell them. Just tell them what you want them to do. If it is non-negotiable for your school, make sure it’s clear. For more advanced teachers, you can probe with questions, but many teachers just like it when you tell them. It is in our nature
to ask questions because it seems more polite, but it usually better to be more direct with what teachers should do.

Similarly, this person encouraged school leaders to stop using “we” when communicating expectations to teachers in order show that “the accountability was placed on staff.” During this session, network leaders also gave guidance about giving teachers more concrete feedback, the procedures for documenting performance problems and suspending teachers, and asked school leaders to collaboratively write “scripts”\(^\text{114}\) for difficult conversations with teachers and role-play to practice for those conversations. There was also guidance about how to respond to crying teachers. The facilitator said, “If you know a teacher cries every time they get feedback, then don’t send them feedback when they are teaching.” Further, it was network policy that teachers should copy feedback from one digital platform and paste it in another because, as the facilitator explained, “This is the way you know that they read their feedback.” Collectively, these observations gave the impression that the network wanted its leaders to take an authoritative stance over teacher practice (with respect to compliance and performance evaluation). There were parallel emphases on accountability in talk about students and principals, suggesting that authority derived from performance, a key feature of new professionalism, was the operating ethos at the network office.

There were also examples of the network leaders mobilizing the discourse of professionalism for disciplinary purposes, another feature of new professionalism. In one professional learning session, a network leader applied it to school leaders when stressing the fundamental importance of cultivating a data-driven culture in schools. Warning leaders that they

\(^{114}\) Notably, this was an instance in which scripts served an educative purpose and seemed to have less of a routinizing effect, since they were not codified in network documents.
could not shy away from data analysis, the facilitator, who was a high-ranking network official, said: “Kill the data monster. It’s not ok to say, 'I don’t do data.' We have to be able to do these things. We are professionals. It’s part of your job. If you don’t know how to do it, I will teach you.” In this framing, participating in data-driven accountability was an essential part of being a “professional.” In another instance, a PL facilitator discussed adding a directive about “communicating things appropriately” and “in a timely manner” to a rubric for evaluating “systems and structures and professionalism” related to service learning events.

Data and Authority. Just as the use of the language of professionalism in assertions of authority reflected the new professionalism, so did the emphasis on what the network’s leaders called “cultivating a data culture in your school.” For these leaders, data were “a pillar of the CMO.” As one high-level leader shared in an interview, the CMO worked to hold “the bar really high, and continuously, as a corollary to that,” continue to “audit and review schools and give feedback on how they’re doing so that there’s really concrete feedback.” This evidence, combined with evidence of network power presented in Chapter Six, shows how Denizen emphasized data as an authoritative source of information over the wisdom of practitioners (e.g., it counted more toward evaluations than self-reflections). This was consistent with the new professionalism, and it illustrated how performativity privileges the legitimacy of data derived from accountability systems due to their gloss of rationality, scientism, and objectivity (Beck & Young, 2005; Dent & Whitehead, 2002; Stichweh, 1997).

Summary. Overall, Denizen accepted the authority of the state regulatory structure over what to teach, and it incorporated this guidance it into its IGI. Although it made small and somewhat symbolic efforts to include teacher voices in infrastructure design, Denizen largely claimed jurisdiction over how things should be taught. It also claimed authority over how
teaching should be evaluated, although school leaders were responsible for enforcing teacher compliance with IGI implementation and conducting teacher evaluations. Leaders used sensegiving techniques during professional learning to exert influence over school culture, aiming to create culture centered around data-driven accountability. In part, conceptions of professionalism involved participation in data culture and compliance with authority.

Making Sense of Authority over Practice at Metro

As shown in Chapters Five and Six, Metro was a non-profit support organization without formal supervisory authority. Superintendents conducted school ratings, and principals conducted teacher evaluations using the Advance tool, which was part of New York State’s regulatory structure. Curricula and standardized assessments aligned to state standards. In this respect, there was a degree of state authority in the IGI, which is essentially inescapable for public schools. However, since Metro’s IGI was less aligned and less specified, it was not as strong of a coupling mechanism (linking the state exostructure to classroom endostructure) as Denizen’s.

At Metro, the IGI had never included a strong mandate or highly-specified instructional materials. Part of this was a necessary consequence of their institutional position (see Figure 6.3). Since Metro promulgated a less aligned, more flexible IGI than Denizen, and the study included school-level data from only one school, it is not possible to know what degree teachers at Metro schools held jurisdiction over instructional planning. Metro’s network staff repeatedly described extensive variation across its network. It is likely that some school principals claimed authority over choosing instructional materials while others did not. Historically, Metro had

115 The possible exception would be rare public schools where the entire student body opts out of state testing. Even at this school, however, teachers receive Advance ratings, based in part on local Measures of Student Learning approved by the state.
treated choosing curricula as teachers’ prerogative, although this had started to change in recent years.

In this section, I examine stakeholder sensemaking about Metro’s IGI and evaluate it while considering the findings of Chapter Six. Analysis illustrates that Metro’s conception of authority over practice aligned most closely with classic professionalism. Like at Denizen, Metro’s operating understanding of teacher understanding stemmed in part from beliefs about teacher knowledge and teacher expertise.

**Learner-centered PL.** Sensemaking among stakeholders at Metro reflected a long-standing belief that strong instructional practice required teacher-centered support structures. There was deep sense that the approach to teacher learning would be mirrored by classroom teachers, spilling over into their treatment of students. This is another example of recognition of value in what Mehta and Fine (2015) called symmetry, even though stakeholders did not use that term. A Metro school principal explained:

You can’t have strong instructional practices, like you can’t—if you’re authoritarian from the principal level down, you’re gonna have authoritarian from the teacher to student classroom. So, like, what the Common Core is asking is deep, critical thinking. You can’t have that if you don’t have this other facilitative teacher-centered stuff happening outside of the classroom and above that. But it’s ambiguous, and it’s a little bit stressful, so like you need the right people, people that can kind of understand that environment that’s not like, “Well, you need to tell me what to do.”

The end of this principal’s comment illustrated the connection between ideas about authority and perceptions of teacher expertise. The “right” teacher was someone who could embrace ambiguity and be self-directing, exercising their discretion in response to the environment. The “right”
teacher did not want to be told “what to do.” For this reason, the principal’s goals for the school year included “building teacher leader capacity” and having them “take ownership.” This reflected a classic professional understanding of teachers as experts.

An assessment specialist at Novel echoed this belief that an authoritarian stance toward teachers was not appropriate:

If a group of schools that was currently using our units decide[d] not to, we [would] be trying to figure out why and how to change our work so it [would be] more accessible, rather than strong-arming people that [we]ren’t interested.

This staff member (echoed by others I cited in Chapter Six) implied that forcing participation would be counter-productive. If teachers or schools were not receptive to guidance, Novel would responsively change its design. Toward this end, an instructional coach explained that Novel was “working closely with teachers, using them as focus groups—polling them constantly.” This responsive design seemed to emerge from an assumption that teachers knew what they needed in the classroom and knew what they needed to learn. This assumption about teachers led Novel to incorporate their feedback into the design of curricula and aligned professional learning.

The belief in the need for symmetry between teacher and student learning, as well as in practitioners’ ability to determine their own learning needs, contributed to the learner-centered model of professional learning observed at Metro and Novel. The majority of sessions the research team observed included ample time for collective sensemaking—what a school leader at the Metro principals’ PLC called “productive struggle.” At the PLC meetings we observed, the
facilitator spoke to the whole group only to introduce and close activities; otherwise, they participated in small-group discussions.¹¹⁶

**Occupational Authority.** Locating authority to determine the validity of their curricular materials primarily at the teacher level, Metro and Novel worked to cultivate legitimacy by building buy-in among teachers and school leaders. As the leader of Novel’s instructional team explained:

> We want [teachers] to want to adopt this common scope and sequence, and we want them to buy into the professional learning community. We also want principals to release them 5 or 6 times a year. It makes a principal buy in and teacher buy in.

Notably, this leader did not say they wanted teachers to adopt the curricula—they *wanted teachers to want* to adopt the curricula. Similarly, the facilitator of Metro’s teacher leader PLC “hoped” that participating teachers “would want to create a [leadership] portfolio.” At the end of the year, some teachers did, and some teachers did not.

As a leader of curriculum development at Novel described, their team kept teacher buy-in in mind as they wrote instructional materials: “There is no shortage of short drill and kill questions in the world, so we don't pay any attention to finding a lot of those. We are looking for items that the teachers will buy into.” The internal motivation of the teacher was more important than compliance. In contrast, at Denizen, internal motivation and compliance were both important, but compliance seemed like a higher priority.

The above quote also illustrated how Metro and Novel saw PL as a tool for building buy-in. By extending authority to participants with learner-centered PL, these networks aimed to

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¹¹⁶ In contrast, at a one-day workshop held by the AFSC (which was attended by teachers from some Metro schools), the facilitator (who did not collaborate with Metro like the other AFSC coach mentioned earlier) spoke to the whole group in a lecture format for more than 40% of the time.
increase teachers’ intrinsic motivation to implement instructional materials using best practices. Although there were some examples of this strategy at Denizen (described in the previous section), there were myriad examples at Metro and Novel. For example, we observed co-construction of PL agendas at Metro, at both the school and network level. At the first meeting of Metro’s principal PLC during the 2016-2017 academic year, a high-level Metro leader distributed the scope and sequence for the year’s meetings and then said:

The dates are pretty well established, but the primary topics of School Share\textsuperscript{117} are not very well established. We are very interested in hearing from you—what you would like to hear more about and what you would like to share more about? We want this to be responsive to your needs and your ideas?

The meeting facilitators gave the principals time for reflection and discussion. Later that month, they completed the scope and sequence using the ideas raised by the principals. Metro staff hoped that having learners co-create the agenda would not only increase buy-in but also make the learning experiences more useful to school leaders, since they were directly connected to leaders’ stated learning goals.

Meetings of the new Metro Algebra PLC were also intentionally learner-centered. The director of Metro’s instructional team described structuring collaborative sensemaking opportunities to support teachers’ adaptation of the network’s instructional materials for their students. This leader described a typical session as: “Here’s a discourse strategy. Here’s a task. What are you actually going to do?” Notably, this activity was not only teacher-centered. It also presented teachers with an opportunity to develop PCK. As described earlier in the chapter, there

\textsuperscript{117} This was a portion of PLC meetings dedicated to having leaders bring best practices from their schools to share with the group. This was another example of how the PL was learner-centered.
were some parallel PL sessions at Denizen (i.e., those on intellectual prep), but PL focused on PCK appeared to be more prevalent at Metro (and Novel). This emphasis was consistent with a classic conception of teacher professionalism.

These findings again illustrate the importance of sectoral position\textsuperscript{118} in shaping logics of professionalism operating within networks. Metro’s position as an affinity partner meant that other entities in the NYCDOE landscape were responsible for providing schools and teachers with compliance training. In contrast, Denizen was responsible for compliance-related training. Thus, the locus of authority over practice seemed to be inextricably related to each network’s sectoral position. It is also likely that sectoral position created a selection\textsuperscript{119} effect—individuals who believed in the efficacy of hierarchal accountability structures may have been more likely to work at Denizen, while those who believed teachers should have more authority over instruction might be attracted to employment at Metro or Novel. These orientations shaped each organization’s collective sensemaking and decisions about IGI design; in turn, IGI design and network sensegiving activities likely reified these orientations.

In supporting teacher teams at the school-level, the leader of Metro’s instructional team used a parallel approach to that of the algebra PLC. For example, early in data collection, they supported\textsuperscript{120} a “cabinet” of teacher leaders at a Metro high school in facilitating meetings with

\textsuperscript{118} The evidence of the salience of sectoral position in shaping instructional guidance illustrates that policies, practices, and sensemaking at the district, state, and federal levels of the United States educational system also contribute to the structuration of teachers’ roles according to logics of professionalism. It would potentially be interesting to conduct a large-scale follow-up study that addresses the cumulative effects of layers of nested guidance on teachers.

\textsuperscript{119} There is evidence that the charter school teaching population is self-selecting, and those who feel constrained by lower levels of autonomy tend to leave (Torres, 2014). In addition, many charter schools involve teachers in the hiring process, and teachers tend to select like-minded colleagues (Malloy & Wohlstetter, 2003).

\textsuperscript{120} This was an example of Metro’s former short-order cook model of support. The principal of the school had asked for support with their teacher leaders, and Metro’s leader of instructional support agreed to facilitate their meetings for a year.
their content area teacher teams. The Metro leader’s approach to learning appear to filter down into the way teacher leaders interacted with their own teams. At a meeting of the math team, the teachers discussed which topics they would cover, bouncing ideas off one another before making decisions. They also strategized about choosing questions for the upcoming midterm exam that would provide them with the best information about their students’ Regents preparedness. In contrast to Denizen, where the network authoritatively wrote shared assessments and used its power to compel teachers to follow the curricula aligned to those assessments, Metro’s schools (and in at least some cases, teachers) had the authority to design customized assessments.

There were also substantive efforts to include teachers in infrastructure design at Novel. Each of Novel’s curriculum projects had a teacher advisory board that met monthly. One specialist at Novel described bringing “developments of the curriculum we’ve been thinking about” to the teacher advisory board to “get feedback on the big decisions before we go ahead and act.” Sometimes teachers would brainstorm with Novel’s curriculum writers or refine materials. This structure seemed quite similar to the curriculum advisor role at Denizen. However, at Novel, no one mentioned that participation in an advisory board was contingent on perceived knowledge or skills. Teachers who were interested\textsuperscript{121} in supporting the curriculum work became part of the advisory boards. Advising on the curriculum was not a job with a hiring process that involved skill vetting. Teachers had the authority to advise on the basis of their occupational position and collegial voluntarism. Thus, it was more consistent with classic professionalism than the structures at Denizen.

\textsuperscript{121} It was not clear from the data whether teachers had to work at Novel’s network schools in order to join the teacher advisory board. Regardless, the data reflected a stance toward teachers’ occupational authority that would influence the design of instructional material used by Metro’s teachers and PL sessions they attended.
Comparison of Conceptions of Authority over Practice

Analysis of conceptions over instructional practice at Metro and Denizen revealed two distinct dominant organizational stances toward teachers. Denizen largely exercised managerial authority over teachers, consistent with the new professionalism. In contrast, much of the IGI design and related sensemaking at Metro (and Novel) reflected implicit deference to the occupational authority of classroom practitioners. One important distinction was the level of scrutiny of teacher practice at each network. In two to three typical weeks at Denizen, it was possible that administrators would observe a teacher as many times as a Metro teacher might be observed in a full academic year. Ostensibly, in the new professionalist paradigm, frequent feedback supports the improvement of practice and professional growth. For example, a proponent of this model might point out that attending physicians heavily oversee the work of early-career physicians during the residency years. However, the purpose of feedback is a critical consideration. Is feedback a tool for evaluation and control, or is feedback a catalyst for learning? In medical residency, scrutiny exists within an apprenticeship structure centered around teaching and learning. At Denizen, network-level stakeholders intended for feedback to support professional learning, but it was also an instrument of evaluation and control. At Metro, there was feedback for evaluation purposes as well, but it was limited to satisfying the requirements of New York State’s advance evaluation system. Other feedback structures were not part of oversight at all, but were structured collegial sensemaking opportunities (e.g., instructional rounds). Thus, feedback had more of a learning thrust at Metro.

Despite this key difference, there were important similarities: each network ceded some authority over practice to the state and each recognized the importance of teacher buy-in to shifting practice as intended.
First, as shown earlier in this chapter, at both networks, the state regulatory structure (i.e., learning standards and standardized assessments) influenced IGI design. Namely, curriculum developers at each network intentionally aligned instructional resources and interim assessments to what the state said students needed to learn and be able to do. Thus, both networks ceded considerable authority over the contents of instruction to the state. In this respect, the new professionalism was present at both networks because: a) the state represented an agent external to schools and b) the state’s accountability system was integral to the surveillance and evaluation of performance at each network. At Denizen, as mentioned earlier, its own high-stakes accountability systems depended on state performance measures. In addition, the state periodically re-evaluated the charter of Denizen’s schools using the New York State Charter Performance Framework (New York State Charter School Office, 2015), which included state test performance benchmarks. At Metro, as mentioned earlier, stakeholders were not directly involved in the application of the state’s accountability system to schools (via Quality Review) or teachers (via Advance), but both used schools’ test performance to assess school needs and internally evaluate the efficacy of their own support programs. This finding illustrates that multiple logics of professionalism could and did intersect within the same organization, and it is suggestive of the pervasive nature of the new professionalism in the current landscape of public schooling the United States. Overall, though, data from monitoring tools at Metro were primarily a tool for organizational learning and continuous improvement; at Denizen, the organization used its monitoring tools to scrutinize and evaluate teacher practice.

Second, stakeholders at Denizen and Metro both recognized the importance of teacher buy-in for the success of curriculum implementation, something shown by numerous other

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122 Both are typical of new professionalism (Barrett, 2009).
studies (Cooper et al., 1998; Datnow & Castellano, 2000; Desimone, 2002; Louis & Smith, 1991; Smith et al., 1997). Professional learning and formal mechanisms for gathering teacher feedback (e.g., surveys) were prominent strategies for building buy-in. Also, each network made efforts to gather teacher input into design. However, these efforts seemed more symbolic at Denizen. At Metro, efforts were more intensive, closer to the “co-construction” or participatory design that has been shown to yield higher rates of implementation fidelity (Borman et al., 2000; Datnow & Stringfield, 2000; Fullan, 2007; Hopkins & Woulfin, 2015; Printy, 2007; Redding & Viano, 2018). At Denizen, teachers were required to demonstrate knowledge and competence before they were hired to support infrastructure design. This reflected a performativity characteristic of new professionalism. In contrast, Metro’s assumption that all teachers had the authority to advise on curriculum design was more aligned with classic professionalism. That said, it was not a paradigmatic example—the network did not appear to accept teachers as the final arbiters in disputes “over the validity of any technical solution” within its instructional materials (Goode, 1969, p. 278).

Third, perceptions of teacher knowledge undergirded beliefs about teacher authority at each network. Similarly, decisions about how much autonomy to grant teachers emerged from beliefs about the locus of authority over teacher practice.

Conceptions of Teacher Autonomy

Autonomy refers to the level of control a teacher has over their practice (Cribb & Gewirtz, 2007). In classic professionalism, members of an occupation largely control their work and exercise considerable discretion (Evetts, 2009). In new professionalism, there is a considerable decline in discretion (Evetts, 2006). Semi-professionals work under conditions of “heteronomy” in which their level of control varies depending on the task, and bureaucracy
forces them to follow more rules than their counterparts in the classic professions (Goode, 1969). Understanding how an educational policy (such as an IGI) frames teachers’ autonomy is important because, as discussed in Chapters One and Two, previous research has shown that decreased teacher autonomy is associated with decreased job satisfaction and increased likelihood of turnover.

In this section, I explore stakeholder sensemaking related to networks’ IGI and autonomy in order to identify the dominant conception of teacher autonomy operating at each. My analysis of the evidence also illustrates how conceptions of authority over practice informed how networks understood autonomy.

**Making Sense of Teacher Autonomy at Denizen**

The four-dimensional analysis in Chapter Six showed that the high levels of alignment, specificity, and network power in Denizen’s IGI all contributed to framing the role of teachers with less autonomy than at Metro. This appeared to be more consistent with the new professionalism than with classic professionalism. In this section, I analyze stakeholder sensemaking about autonomy and assess whether additional evidence about the logic of professionalism at Denizen supports or contravenes those preliminary findings.

**Control over Time.** One theme that emerged in the data involved the use of teacher time. Time is a fundamental dimension in the construction of teachers’ work and their experience of it (Hargreaves, 1994). The structuration of time can be a source of constraint or possibility (Hargreaves, 1994). As such, it has important implications for teacher autonomy. In claiming authority over how teachers should deliver instruction (through its highly-specified lead plans) and monitoring compliance, Denizen exerted some control over how teachers allocated their time within the classroom. There was some irony in this, because part of the motivation for providing
more specified instructional materials was making teachers’ workloads more manageable by freeing up time for discretionary use. However, it seemed that teachers were already so overloaded, the eased planning burden did not free up time during teachers’ work day. Instead, it reduced the extra time teachers were working on evenings and weekends. For example, one curriculum specialist said: “If I can say, ‘I’m giving you back two hours a day, or two hours a night that you could be spending time with your family or sleeping or doing whatever,’ that is really important to me.” Another staff member at the hub office made a similar comment, explaining: “I truly believe that teaching is the hardest job in the world… You as a teacher will go insane doing all this [planning] work every night, and it's not sustainable.” The implied relationship between the time burden of lesson planning and teacher burnout was one reason that Denizen hoped its network-written curriculum would help attenuate turnover. Literature suggests that this was a plausible strategy. Empirical research has shown that teachers in the United States attribute their burnout to chronic stress and heavy workloads (among other factors) (e.g., C. M. Corbin et al., 2019; El Helou, Nabhani, & Bahous, 2016; Skaalvik & Skaalvik, 2007).

However, there were indications that school leaders were reallocating the time that teachers saved because of the prescriptive IGI, expanding their responsibilities outside of the classroom to include more administrative tasks. Teachers at Denizen already had considerable responsibilities in this regard. Schools had no coverage staff, so when a teacher was absent, their colleagues took turns covering the class during their preparation period. Also, teachers served as lunch and hall monitors. The existence of the lead plans may have made some school leaders assume that teachers had more time for work of this nature. As one curriculum specialist explained:

For the teacher, it could either mean like yeah, it’s less time spent on creating their own
curriculum, but then that means that it opens more time for principals to say, “You’re going to do this other thing instead. Because you’ve provided the curriculum, you need less time to actually create the curriculum yourself, but I want you to intellectually prep it to modify it for your kids, but also you have these other responsibilities.” As far as the responsibilities in terms of covering for people’s classes and whatnot, generally I think the consensus is that [teachers] don’t like that.

Another curriculum specialist echoed this observation that teachers were responsible for a lot of administrative work at Denizen schools: “They are so much in logistics. Teachers are pulling off the jobs of [operations], really. And so, they’re making that school run.”

The prominent role of teachers in administrative tasks across Denizen’s schools is illustrative of trends toward the bureaucratization of teachers’ work characteristic of the new professionalism. An increase in administrative tasks takes time away from the core tasks of teaching, planning and executing classroom instruction (Helgøy & Homme, 2007). Some scholars have found that when teachers have less responsibility for curriculum planning, their overall workloads include a higher proportion of managerial or administrative tasks (Sinclair et al., 1996) and that this can be associated with overall intensification of work (Apple, 1998).

Scholars have referred to this as the “colonization” of teacher time (Hargreaves, 1994). It is a case of a broader phenomenon associated with the expansion of surveillance over labor, particularly in the modern state (Giddens, 1991).

**Concerns about Limiting Autonomy.** Another theme that emerged in analysis of sensemaking around teacher autonomy was a sense of concern that Denizen’s prescriptive IGI

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123 Although it was clear that teachers’ work at Denizen included a relatively high proportion of administrative tasks, there were not enough data to definitively claim that the introduction of more prescriptive instructional materials had increased this ratio. This would be an interesting area for further study.
restricted teachers’ autonomy too much. There was recognition that an interest in standardization drove the increase in specificity in the IGI. For example, a specialist described the network’s culture, saying: “We’re very big on setting the standard on certain things.” Another described how an interest in standardization assumed uniformity among teachers that did not exist:

Not everyone intellectually preps in the same way. Not every teacher finds intellectually prepping through comments on a Word document useful. There are certain teachers that like writing on their lesson plans, but that is unacceptable according to a lot of principals, just because they want it to be standardized, essentially.

In acknowledging that prescribed processes for intellectual preparation did not work for all teachers, there was recognition that standardization could be limiting. Similarly, a curriculum specialist acknowledged that the standardized structure of lead plans (e.g., “you need to have two turn and talks”) “could be limiting.” Another lamented that standardization limited creativity that emerged when teachers had more autonomy, saying “Something is lost when you're not creating your own materials. I do think that that is true… There is an element of ownership that is related to creativity… and because you're passionate… you bring that passion to your lesson.”

Yet another described a “crisis of conscience” about writing a prescribed curriculum at all. Thus, at least half of the instructional team, which was responsible for writing fairly routinized, standardized lesson plans (i.e., a sensegiving role that framed the teaching role with restricted autonomy), had misgivings about potential effects on teachers’ autonomy.

**Contingent Autonomy.** Some of these misgivings related to worries about attracting and retaining effective teachers. As one staff member said: “If we say, ‘Here’s the curriculum,’ like, the people that we want to teach are not gonna teach with us.” Presumably, the “people that we want” were high-quality teachers. Similarly, there was a concern that experienced teachers would
become bored without more autonomy. As the new leader of the instructional team said, “If you give [new teachers] a script and say stick to the script, once someone’s been doing that for a few years, like, what’s the point? And they’re not going to stick around.” There was a sense that high quality teachers valued autonomy, and Denizen did not want to scare them off. In addition, there was a shared belief that strong teachers did not need highly-specified lesson plans, but that teachers had to use them until they proved they could perform better without them.

At Denizen, teachers gained autonomy after earning trust through successful performance. Experienced teachers rated as effective were trusted to diverge from the prescribed curriculum or “go beyond the packet” as they wished, even to develop entirely new instructional plans. As a leader responsible for “talent development” explained: “If you’ve shown mastery, and… you’re a strong teacher, you’re strong in curriculum, I’m gonna let you play around with how to get there much more. For first year, probably not.” The leader of the instructional team echoed this: “We want you to start by implementing them exactly as is. As soon as you can show competence with that, start talking to me about what you want to change.” On its face, this aspect of teachers’ roles at Denizen may appear consistent with structures in some classic professions, such as medicine. For example, in medicine, a young resident “gradually assumes more responsibility as she or he demonstrates competence” (Mehta & Fine, 2019, p. 327). There were key differences, however. Medical residents engage in discretionary practice under the supervision and mentorship of a more experienced colleague. They are given opportunities to practice discretionary decision-making. As residents become more competent, they exercise that discretion with more independence across a wider range of patient need. In contrast, Denizen worked to minimize opportunities that inexperienced teachers had to exercise discretion. The lead plans represented an attempt to routinize practice, and there was no formalized system of
apprenticeship. As Denizen’s teachers showed competence and earned trust, their autonomy was less restricted, but there were still hard limits. All teachers, regardless of their perceived competence, were still mandated to administer the trimester exams and to cover the content outlined in scope and sequence documents. Given the high level of classroom surveillance (documented earlier), this likely left teachers with less autonomy than those at Metro’s schools. For this reason, I still believe it is reasonable to categorize autonomy at Denizen as restricted (and therefore consistent with the new professionalism).

Teachers of the upper grades in high schools and high school ELA were exceptions to this general rule. Network staff perceived differences in high school teachers’ receptivity to such curricula. One leader noted “weird tension” with respect to the desired for network-developed curricula wherein “some high schools [we]re like ‘No, thanks!’ and others [we]re like ‘Hey, what have you got?’” There was a shared perception that high school teachers strongly valued their autonomy (more than teachers of younger students). Thus, Denizen was treading more lightly in its development and introduction of curricula in these grade levels, especially in literature courses (the data in Chapter Six illustrate these patterns). As one curriculum specialist explained: “High school teachers are like high school kids. You act the grade you teach, and high school students don’t like to be told what to do, and neither do their teachers.” Another echoed this, saying, “High school teachers, especially in the upper grades, like to, you know, put their stamp on curriculum.” Leaders thought that high school ELA teachers were most likely to resist prescriptive instructional guidance. A high-level leader explained why the network was not developing daily plans for this group: “The idea of saying this is the common text we are going to use is not going to be good... I don’t think it's going to end well.” The perceived variance in teachers’ receptivity to prescriptive instructional materials along grade band and subject area
lines was consistent with previous research that shown how the subject area and grade level of teaching assignments play a constitutive role in the construction of teacher identity (Hopkins & Spillane, 2015; Siskin, 1994; Siskin & Little, 1995; Talbert & McLaughlin, 1994).

**Summary.** In summary, the findings from analysis of sensemaking about autonomy at Denizen offered additional support for the preliminary findings in Chapter Six. Overall, Denizen framed the role of teachers with restricted autonomy, consistent with the new professionalism. There were some concerns among stakeholders, however, that too much restriction would drive away quality teachers. Thus, the network offered a bit more autonomy to some of its teachers—this contingent autonomy depended on experience, performance, grade band, and content area.

**Making Sense of Teacher Autonomy at Metro**

The four-dimensional analysis in Chapter Six suggested that the less aligned and more flexible IGI at Metro framed the role of teaching with more autonomy than did Denizen’s prescriptive, highly-aligned IGI. In this section, I analyze additional sensemaking regarding teacher autonomy among stakeholders at Metro (and Novel) in order seek evidence corroborating or disconfirming those preliminary findings. Also, as with Denizen, the findings in this section illustrate how conceptions of teacher autonomy followed from beliefs about the locus of authority over practice.

Consistent with its organizational stance toward authority, Metro had a long tradition of recognizing the autonomy of school leaders and teachers. As shown in earlier chapters and in previous sections of this chapter, Metro was starting to increase the specificity of its relatively discretionary IGI in response to requests for additional guidance and a desire to catalyze professional learning. Overall, sensemaking about autonomy indicated that Metro wanted to increase specificity without compromising autonomy.
Time for Learning. As at Denizen, Metro staff also worried that excessive workloads contributed to burnout and turnover. For example, one staff person said: “In a lot of our schools there is a high teacher turnover rate, and teachers are essentially reinventing the wheel when it comes to curriculum.” In addition, there was a shared conviction that overwork inhibited professional growth. For example, one staff person at Metro said that the thing teachers really lack is “time to focus on one thing... really it's a time issue.” Staff believed that offering more specified instructional guidance would reduce teachers’ workloads and open up space for teachers to engage in concentrated efforts to improve particular areas of their practice. At Novel, developers of the science and social studies curricula recommended by Metro echoed this:

I have never heard anyone say that teachers don't want more high-quality resources that are geared towards what they need. I've seen other projects where people stop short [of building down to the lesson level] for whatever reason, and it just adds hours onto teachers' days that could be spent doing something else.

At Novel, that “something else” included attending professional learning sessions, engaging with instructional coaches, and reflecting with colleagues in inquiry-driven communities of practice. Metro’s new algebra program represented a step in this direction.124 There was no indication at either network that school leaders were adding additional administrative demands to teachers in response to a perception that they now had less work. This may have been because the flexibility of the curricula made it harder to avoid intellectual preparation (although there were concerns about this), but there were not enough data to draw a firm conclusion about this.

Preserving Flexibility. At Metro (and by association, Novel), network staff thought that most practitioners saw the value in the added coherence resulting from having a shared

124 It would be interesting to see to what extent Metro continues to follow Novel’s example in this respect.
curriculum template. Also, one leader said, they thought people appreciated that “not everyone has to create their own curriculum map.” However, Metro valued giving teachers flexibility, and staff were wary of having schools or teachers feel that Metro was encroaching upon their autonomy. In fact, the leader of Metro’s instructional team went out of their way to dispel this notion. For example, when one school principal became concerned that Metro Algebra was too prescriptive, the leader from Metro called to reassure the principal and explain that “this is not a scripted curriculum at all.”

The desire for continued flexibility was not only about respecting the autonomy that schools wanted, but it was also considered important for maximizing the efficacy of the curricula in improving student outcomes. This related to the diversity across Metro’s schools, which had very different instructional programs and a wide range of needs. Flexibility made it easier for teachers to customize their teaching to their context and students. In turn, stakeholders thought that this customization would catalyze learning. A leader of Novel’s125 social studies programming emphasized:

We think that the curriculum needs to be flexible enough so that teachers can modify it for their students and for their students’ needs, and the resources they have available in their school. We have a lot of teachers who have no technology in their school and teachers who have one-to-one laptops and students, some schools with mainly English Language Learners, and some schools in suburban areas with extremely high-achieving students who are trying to catapult into [Advanced Placement]. So far, people have been saying that the resources have been used in all of those contexts, but they're only able to be used if they're easily modified for whatever the context happens to be.

The greater autonomy in the way Metro and Novel framed the role of teachers was not just about keeping teachers happy; it was also about customizing support. In addition, the comment

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125 Novel also served a diverse portfolio of schools. This quote reflects sensemaking in response to feedback from teachers who used the curricula, some of whom taught at Metro schools. It also reflects a stance toward autonomy that likely shaped the sensegiving activities at Novel, which also would have affected participating teachers from Metro.
reflected an implicit assumption that teachers had the knowledge and skills they needed to adapt the curricula, as long as the design was amenable. Again, this suggested that conceptions of autonomy flowed from perceptions of teacher expertise.

This reflected the notion of “licensed” autonomy at the core of classic professionalism. Metro and Novel appeared to assume teachers possessed expertise and to grant them autonomy, at least in part, by virtue of their position as certified teachers of record. As discussed in Chapter Two, a license or certificate issued by the professional association or the state (and in some cases, such as law and medicine, both) is prerequisite for classic practice. The license or certificate serves a signal that the practitioner has the requisite skills, and as a result, clients and managers grant these professionals wider autonomy than members of other occupations.

Comments about knowledge sharing and collective learning provided further indication that beliefs in teacher autonomy at Metro and Novel were rooted in conceptions of teachers as knowledgeable experts. A leader of social studies programming at Novel explained how flexibility in the instructional materials and autonomous implementation led to being able “to see organically what teachers end up doing with it,” which was a source of innovation and learning:

I think had we gone in to say, “Here’s how every school should make use of [the instructional materials] as a system, I think it would’ve restricted schools in the way that they made use of it, and it's been exciting to see, for example, how some schools are making use of technology or how some schools are using it to support new teachers as like an incubation period, or how some schools are using it for team teaching, so I think all of those things that we hadn’t immediately thought of because we weren’t in those school contexts. I think we’re happy that we didn’t impose any clear, strict rules around how to use it because I think a lot of great innovations come out of schools doing what they do as schools and problem solving.

Although the greater level of autonomy framed in Metro’s IGI was in part related to its environmental position, there was evidence that autonomy was also valued. There was a perception that the network(s) could learn from watching teachers innovate as they exercised
autonomy, even when using shared instructional materials. This provided additional support for earlier findings that Metro (and Novel) understood shared materials as a foundation for professional learning. Their devolution of control over the work to teachers aligned with classic professionalism.

One might argue that use of these materials constrained autonomy, but Metro’s schools voluntarily and selectively adopted the instructional materials in Metro Algebra, Jump Math, and Novel’s science and social studies curricula. When followed with fidelity, these materials necessarily shaped instruction, but they likely did not inhibit teacher discretion. Although school leaders made the decision about opting in, stakeholders at Metro and Novel were very clear that this should only be on the basis of interest and need—trying to train disinterested teachers was not an efficient use of their resources. When teachers attended PL at Metro and Novel, there was also some discussion of selective use and adaptation of the materials, which implicitly located control with teachers. Thus, the framing of their autonomy (at the network level) remained consistent with classic conceptions of professionalism. Medical doctors, for example, classic high professionals, work with frameworks or guidelines for practice, but largely operate without scrutiny or constraint, at least in private practice.

**Conflicting Logics at the School-level.** At Metro schools, autonomy in instructional decision-making was not contingent on strong performance on teacher evaluations, like at Denizen. However, teachers were experiencing efforts to control their practice through the state accountability system. Advance evaluated teachers’ pedagogical competencies using the content-neutral Danielson framework and Measures of Student Learning (MOSL). Although initial plans for Advance included value-added growth scores based on state test scores, the United

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126 Although this is beginning to change (see Reich, 2012).
Federation of Teachers (UFT) successfully fought that version of the policy. Since NYC teachers became subject to Advance, schools have been locally determining what their MOSL will be, often choosing internal assessments such as reading levels. This illustrates how teachers’ unions can buffer teachers from the power of the state, rebuffing some (but not all) of its claims to authority. Although the efforts of the UFT led to a ban on using state standardized test scores in teacher evaluations (Disare, 2018, February 22), the competitive middle and high school admissions process in NYC includes consideration of students’ test scores. Through this, the state’s testing apparatus pressures teachers to cover the required learning standards and prepare students for the format of the standardized tests.

The leaders of Metro and Novel, who were mostly former practitioners, extended classic professional autonomy to teachers, but the state’s bureaucratic apparatus used surveillance tools, technical-rational metrics, and managerial authority to restrict teachers’ autonomy, consistent with the new professionalism. This suggested that teachers in Metro’s schools, who confronted the intersecting IGIs of the affinity group and the public-school bureaucracy, were working under conditions of heteronomy, consistent with semi-professionalism. This illustrated again how multiple logics of professionalism could co-exist within the same organization (e.g., network or school) simultaneously.

**Comparison of Conceptions of Teacher Autonomy**

Teachers at Metro likely enjoyed considerably more autonomy than those at Denizen. However, despite Denizen’s new professional framing of autonomy compared to Metro’s classic framing, analysis of the framing of teacher autonomy revealed that staff at both networks

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127 The UFT is the New York City chapter of the American Federation of Teachers.
expressed concern about teachers’ workloads, theorizing that prevalent burnout stemmed, at least in part, from planning daily lessons.

In addition, stakeholders at both networks expressed concern about restricting autonomy too much. At Denizen, these concerns revolved around attracting the right talent and retaining high performers. However, restricting autonomy was part of the project for quality control implicit in the development of its prescriptive instructional materials, and teachers (with some notable exceptions) could earn limited autonomy through performance. In contrast, staff at Metro worried that restricting autonomy could insult practitioners who thought of themselves as professionals and limit opportunities for learning and innovation as teachers expertly adapted and implemented the instructional materials. As shown in Chapter Six, Metro’s shift to a programmatic support structure was slightly increasing the degree of power in their IGI implementation, but analysis in this chapter has shown that they were still locating authority at the teacher level and preserving autonomy (to the extent they were able within their environmental niche). Also, Metro was increasing the specificity of its instructional materials and incorporating more educative features.

These findings, combined with evidence from stakeholder sensemaking showing beliefs that autonomy created opportunities for professional learning, led me to theorize that an IGI with high levels of specificity and a weaker level of network power may be characterized as an educative IGI. Specificity provided by the use of scripting and educative features may act as scaffolding for teacher learning; flexibility provided by low levels of power in implementation and the inclusion of educative features in lesson materials may allow for experimentation and innovation. Together, these conditions may maximize the educative potential of instructional guidance by catalyzing the development of discretionary expertise in practice by strengthening
pedagogical content knowledge. To reflect this new theory, I have added an educative IGI to the typology I developed for my conceptual framework, as shown in Figure 7.1.

**Figure 7.1**

*Typology of Instructional Guidance Infrastructures*

A study focused on comparing teacher learning (and concomitant shifts in teacher practice) in contexts with instructional guidance infrastructures of varying specificity and mandate would be an interesting way to explore the value of this emerging theory.

**Chapter Seven Conclusion**

Denizen staff’s sensemaking about its relatively prescriptive IGI reflected a dominant conception of teachers’ work consistent with the new professionalism. In contrast, the dominant conceptions of teachers’ knowledge, authority over practice, and autonomy at Metro reflected a
more classic understanding of professionalism. Table 7.1 summarizes findings regarding conceptions of knowledge, authority, and autonomy at each network.

Table 7.1

**Dominant Logics of Professionalism at Denizen and Metro**

<table>
<thead>
<tr>
<th>Abstract Knowledge</th>
<th>Denizen CMO <em>Mostly New Professionalism</em></th>
<th>Metropolitan Schools <em>Mostly Classic Professionalism</em></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Emphasis on pedagogical knowledge in instructional guidance and professional learning; contested understandings of need for content knowledge and PCK</td>
<td>Emphasis on content knowledge, pedagogical knowledge, and PCK in instructional materials and professional learning</td>
</tr>
<tr>
<td></td>
<td>More routinization of knowledge and encoding of knowledge in materials; routinization as a means for quality control</td>
<td>Less routinization and encoding of knowledge in materials; routinization as a support for learning; more emphasis on cultivating embossed and embodied knowledge in teachers</td>
</tr>
<tr>
<td>Authority</td>
<td>Scrutiny of practice with an intent to control and enforce; high-stakes accountability; authority located with the state and network; symbolic efforts to include teacher voice in infrastructure development</td>
<td>Limited oversight; oversight less evaluative and more focused on coaching; recognition of state authority but emphasis on practitioner authority; substantive efforts to include teacher voice in infrastructure development</td>
</tr>
<tr>
<td>Autonomy</td>
<td>Prescriptive instructional guidance; restricted autonomy; limited autonomy for select teachers contingent on performance evaluation</td>
<td>Discretionary instructional guidance; voluntarism; licensed autonomy; autonomy as a catalyst for innovation and learning</td>
</tr>
</tbody>
</table>

Notably, multiple logics of professionalism were present at each network. Contested understandings of the need to prioritize the development of teachers’ content knowledge and
PCK illustrated an undercurrent of classic professionalism at Denizen. Similarly, there was a
gloss of classic professionalism in efforts to codify shared standards of practice in network-
developed curricula written by former practitioners. However, the prescriptive nature of the
curricula (emerging from their specificity and mandated implementation) contributed to a
routinization of practice that may have been deskilling (at least in preventing substantive
intellectual preparation, which required the exercise of PCK). Additionally, the prevalence of
former classroom teachers in the bureaucratic hierarchy at Denizen partially aligned with
theories of semi-professionalism.

At Metro, although classic professionalism was dominant, the inescapable press of the
state regulatory apparatus led to the infiltration of aspects of new professionalism. (This was
particularly true for school-level practitioners who faced the intersection of multiple IGIs with
conflicting messages about teachers’ knowledge, authority, and autonomy. Conditions of
heteronomy caused by this intersection were reflective of the persistence of semi-
professionalism.) Metro (and Novel) were using network-developed curricula and aligned
professional learning to codify and inculcate shared standards of practice in some content areas.
This effort, driven by former practitioners, was consistent with classic professionalism in its
intention, but it fell short of embodying the paradigm. For one, as shown in Chapter Six, there
was lack of coverage across subject areas and grade levels. Additionally, adoption of the shared
instructional guidance was completely voluntary. Not only was there no mandate, there did not
appear to be strong normative pressure either.

At both networks, the co-existence of these logics did not appear intentional. Rather, I
hypothesize that it was an artifact of three things: multiple layers of internal infrastructure from
years of redesign; intersection with external infrastructure; and dissonant views among
stakeholders within the same organization. I hope that my documentation of this co-existence helps contribute nuance to scholarly discourse that has treated the categories of classic and new professionalism as monoliths.

In the next (and final) chapter, I synthesize the findings in Chapters Five, Six, and Seven into an emerging theory of teacher professionalism that centers conceptions of the knowledge base for teaching in determining the framing of teachers’ work.
CHAPTER EIGHT: Discussion and Conclusion

In this chapter, I summarize the findings of this qualitative comparative case study and present theory I developed during analysis—a knowledge-based typology that posits relationships between conceptions of teacher knowledge and logics of teacher professionalism. Then, I highlight areas for future research emerging from the dissertation. In addition, I discuss how my findings extend the literatures in the sociology of work and the study of instructional guidance. Finally, I outline the practical significance of this dissertation, explaining why the framing of teacher professionalism in instructional guidance infrastructures matters.

Summary of Findings

The networks for school improvement in this study were cases of a nationwide trend toward increasingly prescriptive instructional guidance in public K-12 schooling in the United States. Using data from semi-structured interviews, observations of professional learning, organizational documents, and samples of instructional materials, this dissertation investigated the similarities and differences between the instructional guidance of infrastructures of two networks for school improvement operating in New York City, a charter management organization (Denizen CMO) and a non-profit affinity partner organization (Metropolitan Schools). Analysis of the IGIs at Denizen and Metro showed that the dimensions of alignment, specificity, power, and educativeness in IGI design, as well as stakeholder sensemaking about teachers’ use of the IGI, reflected conceptions of teachers’ knowledge, authority over practice, and autonomy, framing teachers’ work according to logics of professionalism.

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128 I discuss this trend in Chapters One and Two. It is also a trend in US higher education (Nixon, 1996) and in Western Europe (Carlgren & Klette, 2008).
Denizen’s instructional guidance infrastructure (IGI) was more aligned and more prescriptive than Metro’s. Both networks expanded and deepened their IGIs for similar reasons, including a desire to raise the quality of instruction at scale, to institutionalize practice and buffer students from the loss of expertise associated with turnover, and to compensate for a perceived lack of teacher knowledge (strongly associated with teacher inexperience). Both networks experienced similar implementation challenges, including the difficulty of changing teacher practice and funding constraints. Both networks grappled with the tension between supporting teachers and constraining them, trying to strike a balance that maximized student learning and teacher satisfaction while relieving burnout.

The networks built their IGIs around fundamentally different conceptions of teacher knowledge. This led to differences in the degree of authority and autonomy they granted to teachers. Denizen’s IGI leaned more toward the new professionalism: a performative understanding of teaching underscored the emphasis on pedagogical knowledge over content knowledge, constructing the role of the teacher as a deliverer or executor of content. However, implementation difficulties led stakeholders at Denizen to question whether a teacher could “execute the content” in a way that was effective for student learning without knowing and deeply understanding it. Thus, some stakeholders at Denizen were starting to embrace a more complex view of the knowledge base for teacher expertise, suggesting an undercurrent of classic professionalism. Further, this dissonance presented a microcosm of the struggle over the status of teachers among education reformers of new and classic professionalist orientation across the country, Figure 8.1 provides an overall summary of the findings at Denizen, using the model of the conceptual framework from Chapter Three to illustrate how multiple sources of data and analysis contributed to conclusions.
Figure 8.1

Summary of Findings: Denizen CMO

Notes. Comparative language refers to Denizen. Descriptive details about the IGI are available in Table 5.6. School-level conditions, which this figure omits, also influence the structuring of teachers’ work.

The predominant conception of teacher knowledge at Metro was broader and more complex—the emphasis on pedagogical content knowledge in the elements of the IGI and in stakeholder sensemaking aligned with a classic conception of professionalism. Nonetheless, the inescapable influence of state learning standards and assessments on the IGI reflected elements of the new professionalism and Metro’s reluctance to dictate shared standards of practice aligned with theories of semi-professionalism. Figure 8.2 uses the conceptual framework to illustrate the overall findings at Metro.
Notes. Comparative language refers to Denizen. Descriptive details about the IGI are available in Table 5.6. School-level conditions, which this figure omits, also influence the structuring of teachers’ work.

The Inevitability of Discretion

Denizen and Metro had different approaches to managing the ambiguity of classroom practice. Both networks developed more specified instructional guidance in the hope of influencing teacher practice. At their foundation, these represented efforts (of varying intensity) to exert some degree of control over the content and delivery of classroom instruction. The networks intended for their instructional materials to close the gulf between materials and teaching practice. Deborah Ball and David Cohen (1996) articulated the consequences of this gulf:
When the gap between materials and teaching is very wide—leaving to each practitioner to figure out how to deal with students’ thinking, how to probe the content at hand, and how to map instruction against the temporal rhythms of classroom life—teachers must invent or ignore a great deal (p. 7).

Teachers close the gulf between materials and practice by exercising discretion. Too much space for discretion can create a planning burden that contributes to teacher burnout, and it can lead to less effective instruction when teachers’ “inventions” are poorly designed or teachers “ignore” important content and skills. Each network took a different approach to this gap.

At Metro (and Novel), the networks framed the role of teaching in terms of expertise. Curriculum developers encoded some content knowledge, pedagogical knowledge, and PCK in instructional materials. They emphasized the development of PCK in professional learning. The relatively low level of specificity in the instructional materials reflected less interest in the routinization of practice. There was a recognition that the enactment of the instructional materials, which depended on PCK, could vary significantly and that this variation had implications for student learning. Rather than trying to routinize instruction, the learning emphasis in Metro’s IGI and sensemaking focused on cultivating embrained and embodied knowledge in teachers (i.e., knowledge located in teachers’ minds and automatic actions rather than encoded in instructional materials). Metro’s increasingly robust instructional supports would help close the gap between the previous iteration of less specified materials and ideal practice, but its leaders did not believe they could control teacher’s discretion through routinization. Instead, their strategy involved supporting teachers in developing expertise in the hope they would then make discretionary decisions about lesson execution that would result in learning experiences for students that aligned with their vision for instruction.
In contrast to Metro, the dominant conception of the role of teachers at Denizen was a performance model. At the organizational level, Denizen had focused mostly on the routinization of pedagogical knowledge in their instructional materials. In general, there was more of a focus on routinizing and encoding each of the three types of knowledge in instructional materials than in developed embrained and embodied knowledge in teachers’ themselves.

These decisions reflected efforts to embed expertise in the system rather than the practitioner (Gray & Whitty, 2010). Despite pervasive concerns about the need to develop teachers’ content knowledge and PCK, the network continued to approach teacher learning using strategies that were predominantly content-neutral and therefore unlikely to strengthen teachers’ PCK. There is some empirical evidence that highly-specified instructional materials can partially compensate for lack of teacher knowledge, but teachers’ depth of PCK strongly influences the quality of implementation (Lewis & Blunk, 2012; Sleep & Eskelson, 2012). Teachers who receive aligned support in professional learning and coaching are more likely to enact the instructional materials with fidelity (Clarke, 1997).

Even though highly-specified instructional materials can lower demands on teachers (in terms of both cognition and time commitment), implementing materials that aim to support ambitious instruction (i.e., student-centered instruction that provides opportunities for inquiry, discussion, and the development of higher order thinking skills) can “tax teachers’ knowledge and skills in ways that typical materials do not” (Charalambous & Hill, 2012, p. 461). Although an analysis of the content of the lesson plans at Denizen was outside the scope of this project,  

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129 This was one notable shortcoming of the four-dimensional framework employed. A more comprehensive analysis that includes examining the contents of instruction (particularly the level of cognitive demand and cultural relevance) is an important next step for this work, but I believe it would require a large team of people. It would not only require more capacity, but also the project would need to tap content area expertise and use interrater reliability techniques, similar to the approach used in the Surveys of Enacted Curriculum (Blank et al., 2001).
there was evidence Denizen's leaders were attempting to encode an ambitious vision of instruction in its instructional materials.\textsuperscript{130} 

Stakeholder sensemaking\textsuperscript{131} at Denizen suggested that curriculum specialists were realizing that it was impossible to script for all the potential contingencies in a classroom lesson. Despite their best efforts, the instructional team could not predict every way that students might respond to a particular concept, question, or task. When they tried to incorporate every potential scenario and encode teacher responses into instructional materials, the lesson plans were too long. Teachers did not read all of the scripting, and even if they had, there were unanticipated moments during the course of instruction. Attempting to implement ambitious plans that required navigation of ambiguity in unanticipated moments required that teachers use a considerable degree of PCK in their practice.

Staff at Denizen repeatedly shared how their experience with the lead plans had showed them how it was not possible to teacher proof the curriculum. Even when lesson plans were highly-specified, teachers necessarily faced ambiguity in momentary, emergent classroom interactions that required them to exercise discretion. As shown in Chapter Seven, Denizen’s stakeholders found that teachers were not exercising discretion as they would have liked (i.e., they were struggling to “execute content”), and they attributed this difficulty to a lack of teacher expertise. The problems they described pointed to a lack of skills reflecting underlying PCK.

These difficulties lent credence to the classic professional understanding of teaching. This perspective holds that teaching is complex, dynamic, multidimensional, discretionary work (D.

\textsuperscript{130} Recall that stakeholders wanted to reduce the ratio of teacher to student talk to less than 30%, raise the level of rigor, and teach students disciplinary thinking skills.

\textsuperscript{131} See section titled “The limits of specificity” in Chapter Seven.
L. Ball & Forzani, 2009; Charalambous & Hill, 2012; J. Cohen & Grossman, 2016; Darling-Hammond, 1999; Grossman, Hammerness, & McDonald, 2009; Lampert et al., 2013; Leinhardt & Greeno, 1986; Rowan, 1994). The implementation difficulties also supported the claim that the work of teaching cannot be fully routinized (Sawyer, 2004).

**The Role of Knowledge in Logics of Teacher Professionalism**

As shown in Chapter Seven, one emergent finding of this dissertation involved the role of conceptions of teacher knowledge and expertise in how networks framed teacher authority in their IGIs. IGI design (and associated sensemaking) revealed implicit claims about types of knowledge teachers needed for practice and their level of expertise (which emerges from the discretionary application of knowledge). Consistent with ideas about expert knowledge under the new professionalism, Denizen claimed jurisdiction over the delivery of instruction and authoritatively used high-stakes technical-rational accountability tools to enforce the boundaries of that jurisdiction. The intense levels of scrutiny involved in Denizen’s application of its accountability systems reflected the performativity and audit culture which characterize the new professionalism. In contrast, Metro devolved authority over practice to school leaders and teachers, consistent with classic conceptions of professional knowledge.

In turn, ideas about the locus of authority over practice directly influenced the framing of teacher autonomy in IGI design. This framing likely had concrete consequences for the working experience of teachers, especially at Denizen, which had a more aligned IGI implemented with greater network power.\(^{132}\) Thus, the analysis showed that conceptions of teacher knowledge

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\(^{132}\) There was likely more variation in teacher autonomy across Metro’s schools, as principals had more autonomy to manage their staffs as they wished. Some may have strongly emphasized standardization of instructional practice within their schools. In addition, teachers at Metro schools faced intersecting (and sometimes) competing, guidance from the IGIs promulgated by superintendents’ offices and the AFSC.
played a foundational and constitutive role in logics of professionalism at Denizen and Metro, as shown in Figure 8.3. (This is not to say such conceptions were the only factors shaping the construction of authority over practice and autonomy. Rather, this was the relationship observed among these three constructs.)

**Figure 8.3**

*Foundational Role of Conceptions of Teacher Knowledge in Logics of Professionalism*

Specifically, in this comparative case study, a more complex view of the knowledge base for teaching (i.e., one that emphasized PCK) was associated with prioritization of teacher authority over practice (relative to network or state authority) and with greater autonomy in the framing of the classroom teaching role. This was the pattern observed at Metro, in the dimensions of its IGI design and in stakeholder sensemaking about that design. In contrast, a simpler and narrower conception of the knowledge base for teaching (i.e., one that emphasized
pedagogical knowledge) was associated with network claims to authority over practice and restricted autonomy in the framing of teachers’ work. This was the pattern observed at Denizen. Figure 8.4 illustrates these relationships.

**Figure 8.4**

*Associations between Conceptions of Teacher Knowledge, Authority, and Autonomy*

*Note.* Expertise is an emergent property of knowledge applied in context.

Although plenty of theory and research has recognized abstract, complex knowledge as a core characteristic of classic professional work (see Chapter Two), I believe that I am among the first to document and describe the relationship between conceptions of knowledge and other defining attributes of professionalism. Other scholars have documented the association between abstract, complex notions of the knowledge base for teaching and the reform agenda of classic professionals, as well as the relationship between new professionalism and a narrower, more
routinized vision of teacher knowledge. Fewer studies, however, have linked subtypes of teacher knowledge (including PCK) to logics of professionalism (as this one does).

Of the few research studies that have explicitly linked subtypes of teacher knowledge to professionalism, most address “professional knowledge” without explicitly examining implications for authority or autonomy (e.g., Dalli, 2008; Holgersen & Burnard, 2016; Park & Oliver, 2008) or address the idiosyncratic South Korean context (e.g., Kwak, 2006; Noh, Kim, Yang, & Kang, 2011). Many of these studies also only looked at one subject area, rather than all four core content areas (as this dissertation does). In my search for similar work, I found one piece that mentioned the connection between PCK, authority, and autonomy, but it was focused on providing a broader history of education reform in Hong Kong (Wu, Cheung, & Chan, 2017). Thus, the mention was oblique, and there was no exposition of a deep body of evidence to substantiate the connection (as in this dissertation). I also found one piece that connected the new professionalism and PCK, but again, it was an oblique mention (Plowright & Barr, 2012).

Having searched the literature and finding only the above, I believe that my dissertation makes a unique contribution to scholarship by documenting patterns in the relationship of conceptions of teachers’ knowledge within networks’ framing of teacher authority and autonomy, linking the sociology of the professions with the literature on the knowledge base for teaching.

**A Knowledge-based Typology of Teacher Professionalism**

Recognition of this pattern led to my development of a typology connecting conceptions of teacher knowledge with logics of professionalism. Figure 8.5 displays this typology, which posits that the logic of professionalism in an IGI’s framing of teachers’ work is a function of the type of knowledge it emphasizes and the strength of that emphasis.

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133 Only the abstracts of these studies were available in English.
**Figure 8.5**

**Knowledge-based Typology of Teacher Professionalism**

Teacher as Non-expert. As shown in the bottom left quadrant, IGIs with a weak emphasis on developing teachers’ content and pedagogical knowledge reflect a relatively simple, inexpert understanding of the knowledge base for teaching. Without intersecting emphases on the cultivation of content and pedagogical knowledge, there is a diminished likelihood that teachers will develop PCK and the discretionary expertise associated with it.

Teacher as Sage. As shown in the upper left quadrant of Figure 8.3, I hypothesize that an IGI that has a strong emphasis on content knowledge (with little emphasis on pedagogical knowledge) frames the teaching role as one of a sage. The sage has expansive knowledge that
they can convey in any way they choose. The onus rests on students to absorb that knowledge, regardless of how it is delivered. This vision of teaching predates the rise of professionalism.\footnote{I make no claims about its prevalence in the premodern world, just its existence.}

Marks (1990) wrote that PCK is discipline-specific knowledge that neither non-teaching subject matter experts nor teachers of other subjects possess. Using this formulation, the sage is somewhat like a non-teaching subject matter expert from whom students are expected to learn. A concrete example is new teachers without any pedagogical training hired through emergency licensure provisions because of their bachelor’s degrees in math or science.

**Teacher as Performer.** Using the data to generate a testable proposition, I posit that an IGI (like Denizen’s), which emphasizes pedagogical knowledge (more than content knowledge or PCK), frames the teacher as a performer who “executes content” by delivering lessons written by someone else. This framing is associated with reduced teacher authority and autonomy, reflecting new professionalism.

**Teacher as Expert.** I posit that an IGI emphasizing pedagogical content knowledge reflects a conception of the teacher as an expert. My analysis suggests that a more complex view of the knowledge base for teaching (indicated by an emphasis on PCK) is associated with networks framing the role of teaching with higher levels of authority and autonomy. This reflects the logic of classic professionalism and a recognition that teaching is knowledge-based work. As shown in Figure 8.3., having well-developed content knowledge and pedagogical knowledge does not guarantee that a teacher will also have well-developed PCK, but they are prerequisite, creating the conditions necessary for PCK to emerge. As novice teachers develop PCK, they develop expert instructional skills. These skills include targeting, surfacing, and navigating,
which use knowledge of students and content in selecting learning goals and choosing engaging and effective pedagogical strategies (Pallas & Neumann, 2019).

The expert teacher draws upon their resources of “content knowledge” and “fluency in using routines” (i.e., pedagogical knowledge) (Schoenfeld, 2011, p. 338) in order to engage in effective instruction characterized by creative improvisation (Sawyer, 2004). The expert draws upon their performative skills but cannot completely follow a script. (As described above, the need for discretion is inevitable.) In moments of ambiguity, the expert applies their professional judgment using PCK, flexibly navigating the interconnections between their content and pedagogical knowledge as they are relevant to a particular student, lesson, and context (Schoenfeld, 2011). The need for improvisation illustrates that knowledge-based work is difficult, if not impossible, to routinize (or rationalize) (Freidson, 1972).

Of the four quadrants, Metro was most aligned with this one. Due to the more robust emphasis on content knowledge and pedagogical content knowledge in their IGI, Metro’s dominant conception of teacher knowledge and expertise was more complex than Denizen’s. This stance was a driving force behind Metro’s location of authority over practice primarily with relatively autonomous teachers, both of which made Metro’s logic of professionalism more aligned with classic professionalism than Denizen’s.

A Note about the Typology. This typology reflects the patterns observed among the types of knowledge that were most evident in my data set. Of course, there are other types of knowledge that are critical for teacher expertise. As discussed in Chapter Three, these include knowledge of context and knowledge of students (including their background knowledge, interests, and cultural assets). Notably, neither network’s IGI clearly emphasized these types of knowledge. Full analysis of the treatment of these types of knowledge in stakeholder
sensemaking was outside the scope of this study, but they did not appear to be prominent themes in the interview data. Further research in warranted in this area. If networks are overlooking the importance of these types of knowledge in their IGI design, it is important to shed light on that oversight.

**Areas for Further Research**

My knowledge-based typology of teacher professionalism posits that the patterns observed at Denizen and Metro may hold across other schooling contexts. One logical next step for future research is applying the framework in other contexts in order to evaluate its generalizability. Application and testing of the other conceptual tools (i.e., the four-dimensional framework for IGI analysis and the overall conceptual framework) and theories (i.e., the typology of IGIs) developed in this dissertation is also warranted.

In addition, it would be valuable to put the theory developed here in conversation with other theories of professionalism that were outside the scope of this project. For example, some have suggested that there is fundamental tension between classic professionalism and democracy (G. L. Anderson & Cohen, 2018; Apple, 1996; Ginsburg, 1997). In a hypothetical world where teacher professional associations had occupational authority over practice, if they determined their standards for the validity of practice without consulting with students and families, scholars argue that this would undermine the democratic aims of schooling (Zeichner, 2009). In response to this tension, some have theorized a democratic professionalism in teaching that would build “alliances between teachers and excluded constituencies of students, parents, and members of the community, on whose behalf decisions have traditionally been made either by professions or by the state” (Darling-Hammond, 2000, p. 380). In addition to this, it would be interesting to explore theories of collaborative professionalism advanced by Hargreaves (2000) and others.
Lastly, it is important to continue this work by studying the implications of IGI design for teachers and their students.

**Implications for Teachers**

Gorman and Sandefur (2011) have called for sociologists to move beyond the descriptive question of whether an occupation meets the criteria for a particular ideal-typical definition\(^{135}\) of professional work. Instead, research\(^{136}\) in the sociology of work should examine relationships between characteristics of work and worker experience at “the individual, organizational, and occupational levels” (Gorman & Sandefur, 2011, p. 290) by examining “employer efforts to exert control over workers and the extent to which workers accept or resist that control” (Gorman & Sandefur, 2011, p. 284). This type of inquiry can help to generate “macro-level understanding of the implications of” professionalization initiatives (Goodson & Hargreaves, 2006, p. 131). This dissertation, in studying networks’ efforts to control teacher practice and the relationship of those efforts to ideologies of professionalism, represents a step in that direction, but research that highlights teacher experiences with the introduction of more prescriptive instructional guidance is a needed complement.

Research exploring implications for teachers falls into two broad categories: local studies at Denizen and Metro extending the dissertation and broader studies exploring the applicability of the ideas to other contexts. In terms of follow-up studies at Metro and Denizen, the logical next step would be hearing teachers’ perspectives on changes in the networks’ IGIs and learning

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\(^{135}\) There is no clear consensus on such a definition (Gorman & Sandefur, 2011). Even given a definition, there would be no clear consensus on the empirical question of whether teaching is a profession or on the normative question of whether it should be.

\(^{136}\) Alternatively, Dingwall (1976) and Benoit (1994) suggest a move toward a more interpretive interactionist approach focused on how occupations make claims to professional status, how audiences receive those appeals, and how these things produce professional status. I leave further discussion of this school of thought to the side since it is of limited relevance to this dissertation.
more about how the networks’ framing of teachers’ work affects their working experience and their own professional identities. Within the same context, a teacher-level study could uncover whether or not teachers at Denizen and Metro experienced the implementation of their network’s IGI in way consistent with the framing of their work implied by the IGI’s dimensions and stakeholder sensemaking. Specifically, a survey approach could measure teachers’ perceptions of their authority over practice and their autonomy. Classroom observations, paired with knowledge measures aligned to observed lessons, would offer insight into teachers’ levels of knowledge. Analysis of these data could offer evidence regarding the validity of the knowledge-based typology of teacher professionalism presented above. Studies in other contexts could employ a similar multi-modal, mixed methods approach.

Study of teachers’ perspectives on the implementation of more prescriptive instructional guidance could potentially expand the literature on how teachers exercise their agency when confronted by institutional pressures, building on the work of McLaughlin, Talbert, Coburn, and others, to gain insight into how organizational conditions moderate microprocesses underlying teacher behavior.

It would also be important to hear from teachers about how the IGIs may have influenced their working conditions, understanding of their own professionalism, and their job satisfaction. Restructuring of teachers’ work requires them to reconstruct their occupational identities (Nixon, 1996) and may influence their engagement (Louis & Smith, 1991). Specifically, several studies of new professionalism have explored how “the rituals and routines of performance surveillance bite deeply into the attitudes, practices, and identities of state professionalism” (Ranson, 2003, p. 469). Additional research should explore how prescriptive IGIs shape teacher identity. Studies in sociology have documented negative effects of performative accountability systems on teacher
identity, including increased stress (Woods & Carlyle, 2002), a more instrumentalist sense of vocation associated with feelings of shame (Woods & Jeffrey, 2002), and fragmented senses of self (Ball, 2003). As shown in Chapter Two, in the context of the new professionalism, increased specificity in instructional materials is often accompanied by increased power behind their implementation (e.g., the application of high-stakes, technical-rational accountability systems). However, the findings of this dissertation illustrate that although the dimensions of specificity and network power in IGIs interact, they are distinct. The case of Metro showed that network (or district) leaders can increase the specificity of guidance without applying mandates or increasing the scrutiny of practice. The data suggested that, under these conditions, teachers may experience increased specificity in an IGI as a tool that eases their workload and facilitates their learning. These findings provide some insight into the important and complex question of what a normatively effective IGI might look like.

At Denizen, the network claimed authority over IGI development and implemented guidance by exerting power over teachers and leaders. This was associated with the restriction of teacher autonomy, but stakeholders reported that teachers were largely pleased with the highly-specified instructional materials. The data suggested that teachers, especially newer teachers who felt ill-prepared, were willing to trade some autonomy in exchange for more specified guidance. However, other studies have shown that prescriptive infrastructures can exacerbate turnover (e.g., Mehta & Fine, 2009). Additional research can continue to tease out whether and how prescriptive guidance can support teachers.

In general, studies in this vein should attend closely to the characteristics of instructional guidance, which is something that research on the new professionalism in the sociology of education has tended to gloss over. Attending to the details of IGI characteristics and
dimensions, as I have done in this dissertation, may help produce scholarship with more pragmatic applications. Namely, applying the four-dimensional framework and IGI typology that I have developed may help researchers identify how and when teachers experience specificity in instructional guidance as supportive and educative. Specifically, the findings of such research could help leaders design IGIs that relieve the burden of instructional planning and reduce ambiguity without hampering the development of PCK by routinizing to the point of stultifying teacher engagement. In this way, my dissertation, and emerging research using similar frameworks, can demonstrate the value of attending to the black box of classroom instruction in sociological research (Raudenbush, 2008).

Finally, research on teachers’ response to prescriptive IGIs should address the net effects on teacher working conditions and satisfaction. The variation at Denizen in the use of scripting approaches with teachers working different grade bands and subject areas indicated that there may be salient patterns in teachers’ receptivity to highly-specified instructional materials. In addition, the data suggested that receptivity likely varies with experience. There is enormous variation across the population of teachers in the United States in terms of their preparation route, teaching context, demographic background, level of instructional knowledge, educational philosophies, beliefs about students’ capabilities, classroom experience, and motivation. There is also emerging evidence that some teachers’ identities may align with the new professionalism (Torres & Weiner, 2018). For example, whereas mid-career teachers may derive more self-efficacy and status from higher levels of autonomy (Rosenholtz & Simpson, 1990), early career teachers may be more inclined to accept standardization in their work (Stone-Johnson, 2014; Wilkins, 2011). Additionally, charter teachers often work extremely long hours (Lake, Dusseault, Bowen, Demeritt, & Hill, 2010; Merseth et al., 2009) and experience burnout at high levels.
(Torres, 2016). Therefore, they may experience more workload relief from the introduction of highly-specified curricular resources than teachers in traditional public schools. Conducting latent class analysis on survey data from teachers would be an interesting way to build understanding of whether there are specific groups of teachers with similar stances toward instructional guidance. Findings from this type of analysis could inform the design of professional learning or other teacher supports.

**Implications for Students**

Inquiry into effects on teacher labor market decisions would have implications for students. To the extent that more prescriptive instructional guidance impacts aspects of teaching that are correlated with teacher turnover (e.g., workload, autonomy, job satisfaction, and self-efficacy), implementation may affect who enters and exits the teacher workforce. This would have clear implications for equality of educational opportunity. Experienced teachers are distributed inequitably across student populations, with students from advantaged backgrounds having disproportionate access to more experienced teachers (Goldhaber, Lavery, & Theobald, 2015). This is important as teacher experience is a reasonable proxy for quality (Goldhaber, Lavery, & Theobald, 2015), and teacher quality is a significant driver of achievement (Rivkin, Hanushek, & Kain, 2005; Rockoff, 2004; Sanders, Wright, & Horn, 1997), especially when students have effective teachers for consecutive years (Akiba, LeTendre, & Scribner, 2007; Haycock, 2003; Konstantopoulos & Chung, 2011).  

Since highly-specified curricula continue to be concentrated in schools and districts serving students from minoritized groups who are navigating poverty (Beatty, 2011), changes in

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137 It should be noted, however, that this body of research fails to account for variation in curricula or the interaction between instructional materials and teacher efficacy.
the composition of the teacher workforce resulting from turnover would disproportionately impact children from historically marginalized communities. The resulting effect on average teacher quality could be positive or negative, depending on the direction of changes in turnover rates. For example, an increase in turnover would likely decrease the average level of teacher experience, which is a strong factor in teacher efficacy (Papay & Kraft, 2015), potentially depressing the average level of teacher quality in underserved communities. Conversely, the attenuation of turnover, which is a widespread (S. E. Anderson, 2008) and expensive phenomenon (Barnes, Crowe, & Schaefer, 2007; Milanowski & Odden, 2007; Watlington, Shockley, Guglielmino, & Felsher, 2010), would be of considerable interest to policymakers.

In addition to examining how labor market trends could impact teacher quality, additional research on prescriptive instructional guidance must address the nature of instruction, in terms of its contents, breadth, depth, level of cognitive demand, and cultural relevance. Public K-12 schools are in a unique position to either perpetuate or disrupt “norms of inequality and injustice” (Oakes, 2015, p. 9). Empirical research has shown that schools can reproduce or widen inequalities (Downey & Condron, 2016; Jennings, Deming, Jencks, Lopuch, & Schueler, 2015). Historically, however, nearly everywhere in the world, schooling has reinforced inequality among social groups (Alexander, 2001; Benadusi, 2001; Oakes, 2015). Curriculum and pedagogy are significant contributors to this documented reproduction of class differences. Children from working class families in the United States, many of whom are black or brown,

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138 Turnover also carries indirect costs: turnover’s disruption of staff relationships can diminish the trust, collegiality, and social capital that support effective teacher collaboration (Bryk, Sebring, Allensworth, Easton, & Luppescu, 2010; Hanselman & Borman, 2013; Hanselman, Grigg, Bruch, & Gamoran, 2016).

139 It is important for all education research to acknowledge that knowledge is never neutral (D. K. Cohen, 2008). One of my biggest regrets about this dissertation is that it was not possible to include the content of instruction in my analysis in a more substantive way.
have had fewer opportunities to experience rigorous classroom instruction (Anyon, 1980, 1981; Bowles & Gintis, 2011; Claussen & Osborne, 2013; Whitty, 2001). Patterns in the adoption of rote scripted curricula may contribute to racialized experiences of subject area learning (Martin, 2006).

As described in Chapter One, much of the motivation around the standardization and prescription of instruction has been couched in terms of equity. The data in this dissertation showed a similar association between the routinization of practice and an interest in “raising the rigor bar.” Any time there is an interest in coherence, however, researchers should ask the question, “Coherence for or around what?” (Sykes et al., 2009, p. 775). It is possible to cohere around ineffective or harmful strategies (Knapp, 2008, p. 535). Similarly, conceptions of equity as sameness (i.e., standardized content for all learners) may dismiss the need to address the consequences of structural barriers related to poverty, disability, and race (Timberlake et al., 2017). Attention to content and impacts on students should account for the diversity of student experience and measure performance in holistic ways. (This is important because rote instruction may lead to strong performance on assessments that test rote skills.) Please note that I am not making any normative claims about the quality of instruction and the contents of the curricula at Metro and Denizen. In fact, the sensemaking around the materials at both networks appeared to align with a constructivist\textsuperscript{140} vision of instruction. In general, I aim only to emphasize the importance of examining contents of instruction more closely and considering the implications for students in future research.

\textsuperscript{140} I define this and discuss it more below.
Conclusion

Overall, the cases compared in this dissertation illustrated the contested nature of teachers’ work and their uncertain occupational status in the United States. At Denizen and Metro, variation in conceptions of teacher knowledge, authority over practice, and autonomy ranged across the perspectives of classic and new professionalists, two groups of education policy reformers who have struggled over the soul of teaching for decades. This dissertation has shown how the question of teacher knowledge and expertise was at the heart of this struggle. Analysis of IGI dimensions and stakeholder sensemaking at each network showed patterns in the conceptions of teacher knowledge, authority, and autonomy that reflected a dominant logic of professionalism.

At Metro, a complex understanding of the knowledge base for teaching (that centered pedagogical content knowledge) was associated with teacher authority and autonomy, consistent with the classic professionalism. At Denizen, a performative understanding of teacher expertise (centered around pedagogical knowledge) was associated with network authority and restricted autonomy, consistent with new professionalism. Although it is not possible to use the findings of this dissertation to make normative claims or generalizations, the project nonetheless constitutes a substantive contribution to scholarship in the sociology of the professions and the educationist literature on instructional guidance. In addition, the findings offer insight into a matter of great practical significance for network, district, and school leaders—namely, how to best maximize the efficacy of teaching at scale.

Scholarly Contribution

After a period of considerable production in the mid-twentieth century, research in the sociology of the professions has slowed despite interesting shifts in the landscape of
contemporary professional work (Gorman & Sandefur, 2011). This dissertation contributes to the revival of that literature. Like the work of Evetts (2011) and Torres and Weiner (2018), this study has shown how new and classic models for professionalism can co-exist within the same organization, sometimes complementing one another and sometimes existing in tension. For example, the documentation of variation in conceptions of teacher professionalism within and across Denizen illustrates how professionalism is “a shifting rather than a concrete phenomenon” (Hanlon, 1998, p. 45). Employing a conceptual framework that attended to the knowledge base for teaching is likely one reason that I was able to identify this variation.\footnote{Boreham (1983) suggested researcher inattention to the knowledge base of the professions was “at the core of the inability of much sociological work to adequately account for the conflict exhibited within many professional occupations” (p. 695).} This attention to teacher knowledge also catalyzed the development of my typology linking conceptions of teacher knowledge to logics of teacher professionalism. I think this typology represents a theoretical advance in scholarship addressing teacher occupational status.

In addition, the dissertation extends the literature on instructional guidance infrastructures by documenting how networks’ home-grown IGIs shape the logics of professionalism structuring teachers’ work. The findings demonstrate how network stakeholders’ beliefs about the knowledge base for teaching drive their IGI design and concomitant decisions about authority over practice and teacher autonomy. This dissertation also illustrates how networks’ perceptions of teachers influence IGI design (in addition to organizational mission and exostructure formed by state policy and sectoral position). My emerging theory of three types of instructional guidance infrastructures (i.e., discretionary, prescriptive, and educative) has potential utility as an analytical tool and presents an opportunity for further investigation.
Finally, I believe the conceptual framework of this dissertation bridges the sociology of work and educationist research in an innovative way. This framework expands and operationalizes Floden and colleagues’ (1988) policy attributes theory and carefully links it to operationalized constructs from sociological theories of professionalism and sensemaking.

**Practical Significance**

The question of how instructional guidance infrastructures (and the organizations that create them) reflect and reify logics of teacher professionalism may seem quite abstract. A reader of the last eight chapters may find themselves wondering whether and why logics of teacher professionalism matter for what they care about—student achievement and equity. Findings related to the relative emphasis on types of teacher knowledge and their association with particular logics of professionalism are significant because it is through the interaction of teachers knowledge with the curriculum that instructional quality emerges (Charalambous & Hill, 2012), likely because teacher knowledge informs teacher action (Carter, 1990). If one logic of professionalism emphasizes a type of teacher knowledge that has been linked to increases in student achievement, then this has implications for policy design. Below I briefly summarize literature on the relationship between types of teacher knowledge and student achievement, before applying that information in interpreting the findings of this dissertation.

Empirical research has shown that the three types of knowledge in the dominant framework for the knowledge base of teaching are all important for instructional efficacy (Darling-Hammond, 2006; Sleeter, 2008). Teacher content knowledge has an independent,

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142 Other things are important, too, of course, like having a critical, reflective stance toward one’s work (Mehta & Fine, 2019), using knowledge of and respect for student culture to make instruction culturally responsive (Chenowith, 2014; Gay, 2002; Ladson-Billings, 1995), and grounding consistently high expectations in beliefs about student capabilities (Gentrup, Lorenz, Kristen, & Kogan, 2020; Pantaleo, 2016). Also, skills related to the domains of emotional support and classroom organization are important for student achievement (Hamre et al., 2013). Discussion of all of these competencies was outside the scope of this project.
positive effect on student learning (D. L. Ball, Lubienski, & Mewborn, 2001; D. K. Cohen, 2008; McCutchen et al., 2002). Many studies have shown that the extent of a teacher’s subject matter preparation (often measured by units of coursework) is significantly associated with student achievement; more coursework is associated with higher gains (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2006; Clotfelter, Ladd, & Vigdor, 2007). Coursework is an imperfect proxy, but studies using direct measures of teacher content knowledge have also shown a positive association between teacher content knowledge and student achievement (P. F. Campbell et al., 2014; Darling-Hammond & Youngs, 2002; B. S. Diamond, Maerten-Rivera, Rohrer, & Lee, 2014; Hill et al., 2005; Ogbonnaya & Mogari, 2014; Wayne & Youngs, 2003). In addition to factual knowledge, familiarity with the methods of inquiry of in a particular content area or discipline is important for good teaching (Mehta & Fine, 2019). Teacher pedagogical knowledge is also positively associated with student outcomes (Darling-Hammond, 2000; Doherty & Hilberg, 2007; Kane, Taylor, Tyler, & Wooten, 2011; Kuhfeld, 2017). A considerable body of empirical studies has also demonstrated the positive effects of pedagogical content knowledge on student achievement (Baumert et al., 2010; Charalambous, Hill, & Mitchell, 2012; Darling-Hammond & Youngs, 2002; Hill et al., 2008; Hill & Charalambous, 2012; Hill et al., 2005; Krauss et al., 2008; Wayne & Youngs, 2003). Arguably, PCK is the most effective of the three types—since it requires content and pedagogical knowledge, teachers who have well-developed PCK also have those, giving them the broadest, most complex knowledge base.

PCK may be associated with improved student achievement because it enables more complex, ambitious instruction. Specifically, PCK supports the implementation of constructivist instruction (Schoenfeld, 2011; Torff, 2003). This type of learner-centered (rather-than teacher- or

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143 Recall that Shulman (1987) considered this one dimension of content knowledge.
materials-centered) instruction engages students in active knowledge construction (i.e., sensemaking). A constructivist approach recognizes that learners are always actively constructing understanding and reorganizing knowledge (Brooks & Brooks, 1999; Sawyer, 2004). Learning requires an extension of background knowledge. Students assimilate new information into an existing schema (or mental framework), reorganize their schemata, and refine them over time (Auger & Rich, 2007). For this reason, student learning improves when teachers assess background knowledge when planning for instruction and intentionally activate that knowledge at the start of instruction (Oyinloye & Popoola, 2013; Pallas & Neumann, 2019).

Supporting student sensemaking and facilitating knowledge construction requires PCK because teachers must link content to “learners’ interests, perspectives, prior knowledge, and learning strategies, among other things” (Torff, 2003, p. 564). Since the active construction of knowledge is messy, unpredictable work, teachers must be prepared to improvise as they support students’ collaborative dialogue, inquiry, and higher-order thinking; such expert improvisation requires a high level of PCK (Sawyer, 2004). The skill of assessing background knowledge and linking instruction with it also requires PCK.

Since this project did not analyze data about teacher or student performance, I cannot make normative claims about the value of one IGI design or logic of professionalism over another. The dissertation is not meant to be an endorsement of classic professionalism in teaching. However, it does show that an emphasis on PCK was the driver behind the classic conceptions of professionalism implicit in Metro’s IGI. At Denizen, stakeholders reported that limiting teacher authority and autonomy hampered teachers’ development of PCK. Thus, classic professionalism may facilitate conditions for cultivating teacher PCK, which in turn may facilitate student learning. The findings highlight the importance of conceptions of the
knowledge base for teaching in IGI design and the role of discretion in facilitating the
development of expert teaching practice. The efficacy of policy in ameliorating educational
problems depends on the validity of its underlying conceptions of about the nature of teacher
knowledge (Cochran-Smith, 2003; Fenstermacher, 1994). The present study has shown that
instructional policy is no exception.

Much of contemporary education policy does not treat teachers as “thinkers, designers,
and co-developers of education who need abstract, powerful, theoretical knowledge content as
key professionals” (Lindström & Beach, 2015, p. 253). Instead, many contemporary policies
frame the work of teaching in narrow terms that fail to acknowledge its complexity (Cochran-
Smith, 2003). Instead, such policies envision teachers as performers or “doers” who are
“responsible only for communicating official school knowledge and evaluating and assessing
pupil performances in relation to it” (Lindström & Beach, p. 253).

This dissertation has demonstrated the value of attention to the epistemology of teacher
knowledge in education policy research. The case of Denizen suggested that if a network
grounds its instructional guidance infrastructure in a new professionalist understanding of
teacher knowledge (e.g., emphasizing generic pedagogical knowledge), the IGI may not change
teacher practice as intended (e.g., teacher may struggle to “execute content”). In contrast, IGIs
designed around a complex, classic professionalist conception of teacher knowledge may better
support teachers’ development of discretionary expertise.
REFERENCES


375


NOTE: Each protocol in this appendix was customized for the particular network and informant prior to conducting the interview.

SSO Interview Protocol

Hi, my name is Clare Buckley Flack, and I work for Professor Priscilla Wohlstetter at Teachers College (TC), the Graduate School of Education at Columbia University, and Dr. Diane Massell from the Consortium for Policy Research in Education. We are conducting a study of the CCLS in New York City. We selected New York City for many reasons, not least of which is that you have been working on the Common Core longer and more diligently than many other places. You also have a diverse set of school support organizations, including the new Borough Field Support Centers and district structures, as well as Affinity Groups and Charter Management Organizations. Broadly speaking, our study will explore how these different structures work with schools on the Common Core. Do you have any questions?

Our interview today is confidential – you will not be identified by name in our written work or in presentations. [Administer consent form, which includes consent to be recorded.] Are you okay with being recorded?

As I mentioned, the interview will last about 60 minutes. Is that still okay for you?

I. Organizational Structure

1. Let’s start with you. How long have you been at [NETWORK]? What are your major areas of responsibility, and key objectives?

2. How would you describe the core goals and purpose of the [NETWORK]? How are you staffed and organized to carry this out?

3. How many elementary, middle and high schools [and, for BFSC, districts] do you support around C&I? How many Renewal and Focus schools do you have, if any?

4. What have been the major successes in your support for C&I/CCLS? The major challenges?

II. Instructional Guidance Infrastructure

5. Who, if anyone in your [NETWORK], leads the work on C&I, and CCLS in particular? How does their work fit in with that of the larger org?

6. Have you established key priorities and objectives for curriculum and instruction (C&I)? How were these determined and by whom? If not mentioned, ask:
• Is the CCLS a major focus of this work? How and why, or why not?
• Are there different priorities at the middle and high schools? What are they?

7. I’ll ask you in more detail later, but for now, can you tell me broadly how [NETWORK] is working to support C&I/CCLS in schools? (If more than 3, probe for most significant)
   *Listen for, probe if not mentioned:* Do you help schools with:
   a. Curriculum and instructional materials, programs or strategies
   b. Tools or other assistance for collecting, analyzing or using data
   c. Professional Development
   d. Coaching

8. Do some schools receive or ask for more support than others?

9. What is the primary purpose and focus of [support]?
   a. Where is it delivered? What takes place in a typical session?
   b. Who participates: whole schools, teams, individual teachers or coaches? How are they selected? Do you require participation?
   c. How frequently does each school or individual receive this support?
   d. Do you require or provide guidance about the processes and routines they should use to implement these new practices in the school?
   e. Who pays for this support? Do schools or individual staffs contribute?

10. Does your network encourage or require schools to use particular curriculum resources? Instructional strategies? What? Why those? Where do these C&I resources and strategies come from?

11. Do all of your middle and high schools use the same curriculum and instructional strategies? What major variations exist, if any? Is that a concern?

III. Organizational Learning

12. How do you formally collect or in other ways receive information about how your efforts are playing out in schools and classrooms? How do you use it? *Listen for,*
   a. Walkthroughs
   b. Teacher Evaluations
   c. Surveys
   d. Leadership meetings
   e. Data Analysis

13. What are some of the lessons you’ve learned about CCLS implementation in working with schools? Has your approach changed in response? What obstacles do you see moving forward?

IV. Nested Organizational Interactions
NYC has a complex system of support for schools, and I also want to understand the role that other organizations play in the C&I/CCLS—specifically, the DOE, the BFSCs and SOs, AGs, and CMOs (name all that are relevant to this respondent).

14. Do you work with other organizations to design and deliver these supports? Do you coordinate with them in other ways? How have they influenced your work?

15. What, if anything, does the DOE require or encourage of your organization around C&I and CCLS? How do they typically communicate these priorities? *Listen for, probe on:*
   - Formal meetings (with whom, about what, how often)
   - Informal exchanges (water cooler)

16. What is the reporting and evaluation relationship between your organization and central? Who supervises/evaluates who?

17. What is the financial relationship between your org and central? Do you have control over your own budget? Do you pursue external sources of funding? How much autonomy do you have over how money is spent and hiring and firing decisions?

18. What is the financial relationship between your org and schools? How much control do you have over budget and staffing decisions?

V. Political Landscape for CCLS

19. How have the politics around CCLS influenced your work? How have they influenced your schools?

Thank you for your time.
School Leader Interview Protocol

Hi, my name is Clare Buckley Flack, and I work for Professor Priscilla Wohlstetter at Teachers College (TC), the Graduate School of Education at Columbia University, and Dr. Diane Massell from the Consortium for Policy Research in Education. We are conducting a study of the CCLS in New York City. We selected New York City for many reasons, not least of which is that you have been working on the Common Core longer and more diligently than many other places. You also have a diverse set of school support organizations, including the new Borough Field Support Centers and district structures, as well as Affinity Groups and Charter Management Organizations. Broadly speaking, our study will explore how these different structures work with schools on the Common Core. Do you have any questions?

Our interview today is confidential – you will not be identified by name in our written work or in presentations. [ADMINISTER CONSENT FORM, WHICH INCLUDES CONSENT TO BE RECORDED.] Are you okay with being recorded?

As I mentioned, the interview will last about 60 minutes. Is that still okay for you?

I. Background and Context

1. Let’s start with you. How long have you been serving as [PRINCIPAL]? How long have you been at this school?

2. We recognize that every school has its own unique character and culture. With this in mind, how would you describe your school to another educator? What is most important for them to know and understand about your teachers? The students?

3. Have you identified key priorities and objectives for your school this year?

II. School Structure

4. Tell me about your leadership teams in the building, and what their main responsibilities are. How do they function? *Probe if not mentioned:* Who takes responsibility for:
   a. Curricular decisions?
   b. Instruction?
   c. Data and Data Use?
   d. Professional Development?

5. Do teachers work in grade-level or department-level teams? How often does this occur, and what is the purpose?

6. Are particular leadership teams more active than others in making decisions about curricular or instructional change? How? What about teacher teams?

III. Instructional Guidance Infrastructure
7. What has your school’s experience with the CCLS been thus far?  
   a. What have been some of the major challenges?  
   b. What have been some of the major successes?  

8. How has your approach to curriculum and instruction changed as a result of CCLS?  
   a. What obstacles still remain?  

9. What are your current goals around curriculum and instruction?  
   a. How were those goals determined? Who was involved in the process?  
   b. Are there different priorities across grade levels or departments?  

10. What strategies do you have in place within the school to support teachers around the implementation of CCLS? For example, professional development, coaching/mentoring, collaboration or meeting time, intervisitations? *Probe, if necessary, for each strategy:*  
    a. What is the purpose of this support? What content or skills are you targeting? Why?  
    b. Who participates? Is this a school-wide support or are you focusing on select groups? Why?  
    c. Are there any incentives or rewards for participants?  
    d. Who provides this support?  

11. How do you monitor progress towards your goals and objectives? *Probe on the following:*  
    a. How do you use this information?  
    b. Is this information shared or reported? With whom is it shared? How is it reported?  

12. What curricular and instructional programs and resources are you using school-wide? Did anyone suggest or require that your school use them; if so, who and why?  

13. Are there other materials/resources you use that are specific to grade levels/departments? Did anyone suggest or require that your school use them; if so, who and why? [*Listen for: Framework for Great Schools, Danielson Framework, Professional Learning Handbook*]  

14. In your opinion, how well do these materials/resources address the CCLS?  

15. How have your students performed on the state tests? Do you have areas of concern? Plans to address them?  
    a. *If not mentioned, ask:* Do you have particular performance targets you need to meet this year?  

16. How are you, as principal, evaluated? By whom?  

IV. Nested Organizational Interactions
NYC has a complex system of support for schools, and I’d like to better understand the role that various organizations play in your work around C&I/CCLS.

17. Which group(s) -- central, SO, BFSC, AG, CMO -- do you work with most frequently around issues related to the C&I/CCLS? Why are you working closely with this particular group?

18. What, if anything, does the [DOE, SO, BFSC, AG, or CMO] require or encourage of your school around C&I and CCLS?
   a. How much discretion do you have to adapt or reject these requirements?

19. How do they typically communicate priorities with you? Listen for, probe on:
   a. Formal meetings (with whom, about what, how often)
   b. Informal exchanges

20. How would you describe your relationship?
   a. Is it more common for you to go to them for information or more common for them to come to your school?
   b. What is the reporting and evaluation relationship between your school and this org? Do they evaluate you? Others within the school?
   c. What about your financial relationship? Do you pay directly for their services? Do they have any control over your budget?

21. Are there other group(s) -- central, SO, BFSC, AG, CMO -- that you do not work with as frequently around C&I/CCLS? Why?

22. Do you work with other schools on issues of C&I/CCLS? How did this come about?
   What is the focus of your joint work? How do you work together (e.g., school visits, joint PD)?

23. How would you characterize the effectiveness of your [NETWORK] in general? Do you have ideas for how they could improve?

V. Political Landscape for CCLS

24. How have the politics around CCLS influenced your work? In your opinion, have the politics changed with the de Blasio administration?

Thank you for your time.
Teacher Team Focus Group Protocol

This focus group was conducted after observation of a teacher team meeting. Informed consent had already been administered.

Now I want to ask you a few questions about the meeting that just occurred and your experiences with CCLS.

I. Structure of Team

1. How did this team form? Probe if not mentioned:
   a. Were any team members missing from today’s meeting?
   b. Has there been much turnover? Why?
   c. Are there any incentives or rewards for participating?

2. How are meetings scheduled? How often do they occur? [Listen for structure of meetings (i.e. ongoing and built into the schedule (routinized) or more sporadic and/or occurring outside of sanctioned teacher time.)]

3. How typical was this meeting that just occurred? [Listen for: routines, structures] Probe if not mentioned:
   a. Do you change the facilitator at each meeting?
   b. Do you use similar protocols in each meeting?
   c. If this was not typical, what occurs in a typical meeting? Why was this meeting different?

4. How often do you use data in your meetings? What types of data? For what purposes?

5. Was there a particular goal for this meeting? If so, how was it set and why?

6. Did you make progress toward this goal today? Why or why not? What are your next steps?

7. How does this meeting relate to your previous team meetings? Were you continuing work from previous meetings?
   a. Are there ongoing instructional challenges/problems upon which you continue to work?
   b. How do you typically follow-up between meetings? [Listen for, probe if not mentioned: intervisitations, turnkey protocols]

8. What are some of the challenges your team faces around working together or accomplishing your priorities?
9. What kinds of decisions is your team free to make on its own? What kinds of decisions need others’ approval? Have you had the experience of having a team decision vetoed by someone else? If yes, who vetoed the decision(s)?

10. What kind of training and support has your team received from building leaders or outside organizations around teamwork/meeting facilitation?

11. What additional training and support do you feel this team still needs around teamwork/meeting facilitation?

II. Instructional Guidance Infrastructure

12. What have been each of your experiences so far in implementing CCLS?
   a. What have been some of the major challenges?
   b. What have been some of the major successes?

13. How does this team contribute to the school’s work around CCLS?

14. How has the school’s approach to curriculum and instruction changed as a result of CCLS?
   a. Could you provide an example?
   b. What obstacles still remain?

15. In your view, what are the school’s current goals around curriculum and instruction?
   a. How were those goals determined? Who was involved in the process?
   b. Are there different priorities across grade levels or departments?

16. Who monitors progress towards these goals? Probes:
   a. Is this information shared or reported?
   b. [IF YES] With whom is it shared? How is it reported?

17. How does your team use this information?

18. What curricular and instructional programs are you using in your classrooms?
   a. Were you involved in selecting these materials?
   b. In your opinion, how effective are they in helping students to master CCLS?

19. What kind of training and support have you received from building leaders or outside organizations around CCLS?

20. What additional training and support do you feel you still need around CCLS?

Thank you for your time!
Appendix B: Protocol for Phase Two Interviews

Hi, my name is Clare Buckley Flack, and I am conducting this interview as part of my dissertation research. My dissertation looks at how teachers in school improvement networks have been experiencing the introduction of new curricular resources. Specifically, I am interested in how curriculum may affect how teachers think about themselves, their working conditions, and their futures. Thanks again for agreeing to meet me today. As I mentioned in my email, the interview will last about 30 minutes. Is that still okay with you?

Our conversation today is completely confidential. You will not be identified by name or by your position in any of my written work or presentations. Similarly, I will not identify your school or school network. If a question makes you uncomfortable, you are under no obligation to answer it. You reserve the right to discontinue your participation at any time during the conversation. Do you have any questions before we begin? [ADMINISTER CONSENT FORM, CONFIRM CONSENT TO BE RECORDED].

1. In recent years, [NETWORK] has been developing new curricular resources for its teachers. Can you tell me more about the development of curricular resources in [GRADE BAND AND SUBJECT AREA]?
   a. When were the resources in [GRADE BAND AND SUBJECT AREA] first developed? [PROBE: What was the impetus for their development?]
   b. Which grade levels were first? Why? [GENERALIST PROBE: Which subject areas were first? Why?]

2. [IF NOT YET COVERED] What has your role been in this process?
   a. Has there been a teacher curriculum advisor working with you? [GRADE BAND AND SUBJECT AREA]? [PROBE: What has their role been?]

3. Can you tell me about where the curriculum development process in [GRADE BAND AND SUBJECT AREA] stands right now?
   a. In interviews my team conducted a couple of years ago, people at [NETWORK] identified certain curriculum programs that some teachers were using (for example, Eureka Math, Alexandria Plan). Are teachers in [GRADE BAND AND SUBJECT AREA] exclusively using any programs like this now?
   b. Are pieces of these programs integrated into any network plans? [PROBE: If so, what does that integration look like?]

4. How would you describe the curriculum resources themselves?
   a. How do you think certain features of the resources may help teachers learn new or stronger practices?
   b. Would you use the term “scripted” to describe the network’s lesson plans? [PROBE: Why or why not?]
     i. [IF LESSON PLANS CONTAIN SCRIPTS] To what extent does the network expect teachers to follow those scripts? Why?

5. What would you say are the advantages of having these new resources?
a. What have some of the challenges been?

6. In what ways are the resources consistent with the values and pedagogical beliefs of [NETWORK]?
   a. Are there inconsistencies?

7. Do you think the new resources are changing the nature of teachers’ work? If so, how? [PROBE: In terms of their job responsibilities? In terms of how they spend their time? In terms of which skills are most important?]
   a. Do you have a sense of whether the existence of these resources may be changing what principals at [NETWORK] look for when hiring new teachers?

8. How do you think have teachers in [GRADE BAND AND SUBJECT AREA] responded to the new resources? [PROBE: How do you gather information about this?]
   a. Do you think teachers have more or less autonomy than they did before? [PROBE: How do they seem to feel about this change in their level of autonomy?]
   b. Do teachers seem more or less satisfied with their jobs than they were prior to the introduction of the new resources? [PROBE: Why do you think that is?]
   c. Do you have a sense of whether teachers are more or less committed to teaching at [NETWORK] than they were prior to the introduction of the new resources?


10. What knowledge do teachers need to be able to implement the new curricular resources as designed?
    a. How do you know whether teachers are implementing the curriculum as designed?

11. What are the next steps for you and your team with respect to curriculum development and implementation in [GRADE BAND AND SUBJECT AREA]? [PROBE: How has the network’s experience with the curriculum thus far influenced these future plans?]
    a. What role will teachers have in these plans?

Thank you very much.
Appendix C: Field Observation Code Sheets

Professional Development Observation Protocol I

Date of Event: ____________________________  Start Time: __________
Observer: _______________________________  End Time: ____________

I. Background

1. Name of Event: ____________________________

2. Location of Event: __________________________

3. Sponsoring SSO: __________________________

4. Facilitator(s) of Event (NOTE: Specify position and organizational affiliation, if different from the sponsor):

5. Purpose of PD session (NOTE: Collect official agenda, if available):

6. Estimated number of attendees (NOTE: Please collect copy of sign-in sheet or RSVP list if available):

7. Target Audience (i.e., teachers, principals, superintendents, certain schools, internal/external to SSO, etc.):

8. Brief description of learning environment (i.e., location, size of space, quality of light, sound quality, inclusion of refreshments, etc.):

9. Brief description of participant arrangement (i.e., small groups, circle/U-shape, auditorium style, assigned seats, mixed groups):

II. Activities observed during this session

Note: If an activity was not observed, please write “Not Observed” beside “Time” under the activity description.

10. Participants listened to a formal presentation/lecture (with minimal group participation)
   a. Time(s):
   b. Presentation/lecture delivered by:
   c. Notes:

11. Participants engaged in discussions/seminars with reporting out
   a. Time(s):
   b. Notes on formal sharing between participants:
c. Notes on informal sharing between participants:

12. Participants engaged in problem solving/investigation focusing on disciplinary content, pedagogy, and/or reform issues
   a. Time(s):
   b. Notes:

13. Participants read about disciplinary content, pedagogy, and/or reform issues
   a. Time(s):
   b. Notes:

14. Participants wrote about disciplinary content, pedagogy, and/or reform issues
   a. Time(s):
   b. Notes:

15. Participants engaged in a coaching or mentoring process
   a. Time(s):
   b. Notes on participants practicing coaching/mentoring:
   c. Notes on participants working with a coach/mentor:

16. Participants engaged in lesson study and/or demonstration
   a. Time(s):
   b. Notes:

III. Materials used or referenced during this session

Note: If a material was not used or references, please write “Not Observed” beside “Time” under the material description.

17. Framework for Great Schools
   a. Time(s):
   b. Notes on how materials were used and by whom:

18. EngageNY
   a. Time(s):
   b. Notes on how materials were used and by whom:

19. Danielson Framework (Framework for Teaching)
   a. Time(s):
   b. Notes on how materials were used and by whom:

20. Advance
   a. Time(s):
   b. Notes on how materials were used and by whom:
   a. Time(s):
   b. Notes on how materials were used and by whom:

22. Citywide Instructional Expectations
   a. Time(s):
   b. Notes on how materials were used and by whom:

23. Common Core Library
   a. Time(s):
   b. Notes on how materials were used and by whom:

24. Other:
   a. Time(s):
   b. Notes on how materials were used and by whom:

IV. Low Inference Notes *(direct quotes, observations)*

<table>
<thead>
<tr>
<th>Time</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
Professional Development Observation Protocol II

Date of Event:
Location:
Start Time:
End Time:
Observer:

I. Background

1. Name of Event:

2. Sponsoring SSO:

3. Facilitator(s) of Event:
   Specify position and organizational affiliation, if different from the sponsor

4. Purpose of PD session:
   Note: Collect official agenda, if available,

5. Participants at Session
   a. Estimated number of attendees:
   Please collect copy of sign-in sheet or RSVP list if available,
   b. Target Audience (i.e., teachers, principals, superintendents, certain schools, internal/external to SSO, etc.):

6. Brief description of learning environment (i.e., location, size of space, quality of light, sound quality, inclusion of refreshments, etc.):

7. Brief description of participant arrangement (i.e., small groups, circle/U-shape, auditorium style, assigned seats, mixed groups),

NOTES
Supporting quotations and observations; include approx. length of activity where appropriate

Org. Structures

1. Presence of leader(s) or facilitator(s) (List all names/positions)

2. Purpose of the session (circle one)
   Written  Stated  Implied

3. Facilitator provides leadership or guidance (Tally each occurrence below)

Collective Inquiry/ Interpretation/ Sensemaking
4. Participants have time to ask clarifying questions
5. Session focused on teaching and learning
6. Participants discussed instructional challenge(s)
7. Lesson plan study or demonstration
8. Data used when appropriate (Specify types of data and to what ends they were used.)
9. Sharing information across schools
10. Looking at student work

**Organizational Embedding, Encoding, and Memory/ Recalibration**

11. Participants practicing new knowledge or skills
12. Protocols used when appropriate (Specify types of protocols and to what ends they were used.)
13. Participants agreed upon action items and/or next steps (Please specify when possible)
14. Tangible output resulted from session (i.e., lesson plan, protocol, etc., collect if possible)
15. Discussion of how to turnkey best practices (Tally each occurrence below)
16. Participants consider how new information from the PD session could be applied to participants’ own settings (e.g., school, classroom, grade-level team)
17. Participants indicate change in goals or approach based on data
18. Participants and facilitator(s) use shared language

**Relational Trust**

19. Conversation among participants was generally respectful and tactful
20. Most/all participants contributed
21. Session culture/norms allow for discussion and debate
22. Members share what is/is not working
23. Participants feel comfortable to disagree with facilitator and/or each other
24. The session involved creation of or sharing of new goals and objectives. Goals were set by:
   ☐ Session presenter/facilitator
   YES Participant(s) (for their own schools)
   ☐ Both
   ☐ Other: _____________________

Incentives

25. The session involved incentives or sanctions for participants to encourage progress towards particular goals. *(Please describe any incentives or sanctions referenced.)*

26. Participants are off task throughout the session.

Decision Rights

27. The following decisions were made or referenced about an approach to CCLS implementation during this session:
   ☐ Curriculum
   ☐ Pedagogy
   ☐ Testing/Accountability
   ☐ Upcoming PD
   ☐ Budget
   ☐ Other: _____________________

   Evidence that decisions were made by:
   ☐ Facilitator/presenter
   ☐ Participants
   ☐ Both
   ☐ Other: _____________________

Information Flow

28. The session involved the use of or learning around communication systems. These systems were meant to facilitate communication between:
   ☐ School actors and those in SSOs or central

29. Communication systems used or referenced included:
   YES Data dashboards
   ☐ Feedback surveys
   ☐ SSO-based meetings
   ☐ School-based meetings
   ☐ Newsletters
   ☐ Website
☐ Other: _____________________

OBSERVER CHECKLIST:

___ Meeting agenda

___ Materials handed out before and during the PD session

___ Participant sign-in sheet/RSVP list

___ Evaluation forms and summary of results (if available)

___ Protocols

___ Tangible outputs from meetings (Lesson plans, worksheets, curriculum maps, etc.)

___ Other materials: ______________________________________________________

______________________________

______________________________
Teacher Team Observation Protocol

Hi, my name is Clare Buckley Flack, and I work for Priscilla Wohlstetter at Teachers College (TC), the Graduate School of Education at Columbia University, and Dr. Diane Massell from the Consortium for Policy Research in Education. We are conducting a study of the CCLS in New York City. More specifically, we are interested in how outside organizations are supporting your implementation of CCLS. As part of our research, we will be interviewing your principal and other leadership team members. We may also be talking with some of you in more detail about your work on this team and your work around CCLS more generally. I am here today to observe your team meeting so I can learn about how you work with each other around implementing the CCLS. As an observer, I will not be participating in the meeting. Do you have any questions?

This meeting today will remain confidential—you and your school will not be identified by name in our written work or in any presentations. [ADMINISTER CONSENT FORM, WHICH INCLUDES CONSENT TO BE RECORDED.] Are you okay with being recorded?

As I mentioned, I will not be participating in the meeting, but I will debrief with you for approximately 30 minutes at the end of the meeting.

**Observer(s) should collect:**

- Sign-in sheet
- Agenda (when applicable)
- Protocols (when applicable)

**Look-fors**

**Structures:**
- Presence of a leader or facilitator (note if formal/informal)
- Purpose of meeting (note if written, stated, or implied)
- Facilitator provides explicit leadership or guidance
- Division of participation between facilitator and other members

**Evidence of collective inquiry, interpretation, and sensemaking:**
- Meeting is focused on teaching and learning
- Members discussed instructional challenges
- Lesson plan study or demonstration
- Use of protocols (specify types of protocols and to what ends they are used)
- Data use (specify what types of data and to what ends they are used)
- Discussion of how to turnkey best practices
- Discussion of how to share knowledge across teacher teams

**Trust and Climate:**
- Members ask clarifying questions
• Conversation among members was generally respectful and tactful
• Most/all members participated
• Team’s culture/norms allow for discussion and debate
• Members share what is not working/personal challenges

Outcomes:
• Team agreed upon action items and/or next steps
• Tangible output results from meeting (i.e., lesson plan, new protocol, etc.)
• Evidence of monitoring progress towards goals
• Team changes goals or approach based on data

NYCDOE Tools and Materials:
• EngageNY
• Danielson
• Advance
• Common Core Library
• Social Studies Curriculum
• Professional Learning Handbook

Teacher Team Observation Notes

School:
Today’s Date:
Name of Team:
Name of Observer(s):
# Team Members Present:

0:00-0:05: Activity (i.e., Norm setting, share out, agenda setting, etc.)

• Type your low-inference notes here. (Inferences and questions should go in parentheses.)

0:05-0:10
0:10-0:15
0:15-0:20
0:20-0:25
0:25-0:30
0:30-0:35
0:35-0:40
0:40-0:45
0:45-0:50
0:50-0:55
0:55-0:60